R E P O R T R E S U M E S

ED 020 099 RE 001 368

ERIC/CRIER INFORMATIONAL PUBLICATIONS. CUMULATIVE EDITION, 1967-68.

INDIANA UNIV., BLOOMINGTON, ERIC CH. ON READING

PUB DATE JUN 68

EDRS PRICE MF-$0.25 HC-$1.12 26P.

DESCRIPTORS- *READING RESEARCH, *INFORMATION RETRIEVAL, *INFORMATION PROCESSING, *INFORMATION STORAGE, *INFORMATION DISSEMINATION, INFORMATION SYSTEMS, CLASSIFICATION, BIBLIOGRAPHIES,

THE SECOND CUMULATIVE EDITION OF THE EDUCATIONAL RESOURCES INFORMATION CENTER/CLEARINGHOUSE ON THE RETRIEVAL OF INFORMATION AND EVALUATION IN READING (ERIC/CRIER) INFORMATIONAL PUBLICATIONS INCLUDES THREE NEWSLETTERS AND THREE INFORMATION BRIEFS. THE NEWSLETTERS PRESENT DISCUSSIONS OF THE ERIC/CRIER DOCUMENT PROCESSING FOR RESEARCH IN EDUCATION, THE DEVELOPMENT OF A MULTIDIMENSIONAL CLASSIFICATION MATRIX FOR ORGANIZING AND SEARCHING READING LITERATURE, AND THE ERIC/CRIER PROJECT ON INSTRUCTIONAL MATERIALS INFORMATION ANALYSIS. THE INFORMATION BRIEFS PRESENT LISTINGS OF REPORTS ON CURRENT READING RESEARCH CATALOGED IN THE MAY, JUNE, AND JULY 1967 ISSUES OF RESEARCH IN EDUCATION, PUBLICATIONS ON PROJECTS RELATING TO READING SPONSORED BY PROJECTS TO ADVANCE CREATIVITY IN EDUCATION (PACE), AND RESEARCH ON READING SPONSORED BY THE UNITED STATES OFFICE OF EDUCATION. COPIES OF ERIC/CRIER INFORMATIONAL PUBLICATIONS, CUMULATIVE EDITION, AND THE DOCUMENTS LISTED ARE AVAILABLE FROM THE ERIC DOCUMENT REPRODUCTION SERVICE IN MICROFICHE OR HARD COPY REPRODUCTIONS. ERIC/CRIER IS A JOINT PROJECT OF THE INTERNATIONAL READING ASSOCIATION AND INDIANA UNIVERSITY IN COOPERATION WITH THE UNITED STATES OFFICE OF EDUCATION. (NS)

ED020099

CUMULATIVE
EDITION
1967-68

ERIC/CRIER INFORMATIONAL PUBLICATIONS

U. S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

ERIC CRIER
CRIER ERIC
ERIC CRIER
CRIER ERIC
ERIC CRIER

RE 001 368

ERIC/CLEARINGHOUSE ON RETRIEVAL OF INFORMATION AND EVALUATION ON READING . . . a national clearinghouse to organize and disseminate significant research, information, and materials on reading to teachers, administrators, researchers, and the public. A joint project of the International Reading Association and Indiana University in cooperation with the Educational Resources Information Center of USOE.

ERIC CRIER

CLEARINGHOUSE ON READING

ERIC/CRIER INFORMATIONAL PUBLICATIONS
Cumulative Edition, 1967-68

This is the second cumulative edition of ERIC/CRIER Informational Publications. It includes Volume 2, Numbers 1, 2, and 3 of the *ERIC/CRIER Newsletter* and *Information Briefs* Numbers 3, 4, and 5.*

The *Newsletters* describe Clearinghouse functions during its second year and introduce readers to major operations and projects within the Clearinghouse. The *Information Briefs* direct attention to reports on reading research which are available from the ERIC Document Reproduction Service (EDRS) in microfiche and hard copy reproductions.

NOTE: The first *ERIC/CRIER Newsletter* in this edition and *Information Brief 3* (November, 1967) indicate that EDRS is a part of Bell and Howell Co. As of January 1, 1968, the contract for EDRS was transferred to The National Cash Register Company. ALL document reproductions are now available from The National Cash Register Company—this includes documents listed in *Information Brief 3.* The price of individual microfiche was also changed in the new contract from $0.09 to $0.25. Therefore prices listed in *Information Brief 3* should be adjusted according to the pricing table given on page 12. Complete, detailed instructions for ordering from EDRS are given on page 22 of this edition.

Leo C. Fay, Edward G. Summers,
Directors

* Copies of *ERIC/CRIER Informational Publications, Cumulative Edition, 1966-67* (ED 012 692) are available from EDRS in microfiche $0.25 and hard copy $0.96.

200 Pine Hall, School of Education, Indiana University, Bloomington, Indiana 47401. Area Code 812, 337-9101

CONTENTS

ERIC/CRIER Newsletter, Volume 2, Number 1 3

ERIC/CRIER Document Processing for *Research in Education* 3
Spinoff from the Director—Recent Developments 4
ERIC/CRIER Staff Additions 5
Information Bits . . . 6

Information Brief, Number 3 7

Current Reading Research, a report of reading research announced in May, June, and July issues of *Research in Education*

ERIC/CRIER Newsletter, Volume 2, Number 2 9

Developing a Multidimensional Classification Matrix for Organizing and Searching Reading Literature 9
ERIC/CRIER Advisory Board 10
Office of Education Research Reports 10
Spinoff from the Director—A Note on Using the ERIC System 11
Clearinghouse Reviews 11
Expansion in Dissemination 11
Information Bits . . . 11
ERIC Document Reproduction Service 12

Information Brief, Number 4 13

Publication on PACE Projects, a report of the reading research in *Pacesetters in Innovation, Fiscal Year 1966.*

ERIC/CRIER Newsletter, Volume 2, Number 3 15

The ERIC/CRIER Instructional Materials Information Analysis Project 15
A Foundation Report on Information Problems 16
Need Information about ERIC and ERIC/CRIER? 16
Spinoff from the Director—Expansion of Research Literature on Reading 17
ERIC/CRIER to Participate in IRA Boston Convention 17
Information Bits . . . 18

Information Brief, Number 5 19

USOE Sponsored Research on Reading, a report of the reading research in *Office of Education Research Reports, 1956-65.* 19
Instructions for Ordering from EDRS 22
Research in Education, a definitional note. 22

ERIC/CRIER Advisory Board, 1968-69 23

The Eighteen Clearinghouses in the ERIC System 24

ERIC CRIER NEWSLETTER

VOLUME 2, NUMBER 1 NOVEMBER, 1967

ERIC/CRIER DOCUMENT PROCESSING FOR RESEARCH IN EDUCATION

After careful planning and months of effort and coordination a certain percentage of the documents in any ERIC clearinghouse now appears in *Research in Education.* The documents are processed internally and each clearinghouse sends in its input on punched paper tape via the Friden Flexowriter. The assembled tapes are collated and used to produce the monthly publication. The production of RIE is contracted to North American Aviation, Autonetics Division located at Anaheim, California.

The Clearinghouse staff has relied on NAA for overall direction and orientation while organizing the internal system for processing documents. Detailed guidelines for descriptive cataloging, abstracting, and indexing were prepared for all clearinghouses. Staff training sessions were also conducted by NAA.

The Central ERIC staff in Washington, D.C., has coordinated the clearinghouses and NAA, announced new acquisitions of the clearinghouses, and set up a system to provide the educational community with the documents at a minimal cost. The Central ERIC staff conducted training sessions for key personnel, made on-sight visits to further assist the clearinghouse personnel, developed the *Thesaurus of ERIC Descriptors,* and assisted in the development of various guideline publications. The efforts of both North American Aviation and Central ERIC staff aided the overall development of the system. However, the ERIC Clearinghouse on Reading staff organized and systematized the internal operations of the acquisition network; the cataloging, abstracting, and indexing of documents; and the preparation of documents for input to North American Aviation. Following, in somewhat chronological order, is a brief survey of the internal processing a document undergoes prior to its actually appearing in RIE.

Acquisition of Documents

In organizing any information system, a major aim is to obtain as complete a coverage of the available document sources as possible in the acquisitions program. The Clearinghouse staff has (1) identified and contacted over 4,000 professionals in reading throughout the nation to serve as an acquisition network, (2) organized an inventory of information sources in reading to systematize the identification and collection of reading materials, (3) worked with the centralized acquisition unit of the U. S. Office of Education to systematically obtain documents produced by federal agencies, (4) established a working relationship with the Reading Research Center of the University of Chicago so that following the publication of the annual summary of reading research in the *Reading Research Quarterly,* the complete set of documents can be obtained for input, and (5) opened exploratory discussions with the University of Pennsylvania to utilize their valuable collection of documents on dyslexia. In addition, documents have been received from several specialized sources established by Central ERIC.

Beginning Processing

These activities have in effect identified, organized, and systematized the acquisitions program of the Clearinghouse. The flow of documents into the Clearinghouse can be related to the various activities noted. Once a document arrives at the Clearinghouse, however, its acquisition source has little influence on the in-house processing procedures. As soon as the document arrives, quality control criteria are applied to it to determine whether or not it will be inputted into the ERIC system or remain in the in-house holding or reject file. The quality control criteria also determine the level of processing for that document. If the document is to be inputted into the ERIC system, a clearinghouse RE number for internal identification similar to the ED number used in *Research in Education* for ERIC identification is assigned to it. After assigning the RE number to the document, it is sent from acquisitions to the documentation chief. The documentation chief catalogues the document according to ERIC specifications. Descriptive cataloging for ERIC is similar to traditional library descriptive cataloging which lists the author, title, publisher, and pagination. Additional information such as a report series number, institutional source codes, contract and/or grant numbers, and prices for microfiche and hard copy are included in ERIC descriptive cataloging.

Abstracting

Upon completion of cataloging, the documentation chief continues processing by distributing the document to a document analyst for abstracting and indexing. The purpose of abstracting for ERIC, as well as for any information system, is twofold: (1) to reduce the size of the materials to be disseminated since it is not economical for an information system to disseminate total documents, and (2) to communicate to the user group the significant contents of documents. In writing abstracts for the user group, the document analysts write either indicative abstracts which are designed to point out the important content of a document to the reader, or informative abstracts which are designed to be abbreviated versions of the original documents and usually include some description of the purpose, procedure used, findings, and conclusions found in the documents. The most crucial element in any abstracting process is the communication of the document contents to the user group. This element of abstracting is strongly emphasized at the Clearinghouse.

After a document has been abstracted, and prior to its being indexed, the abstracts are carefully edited for accuracy and

completeness of information, style, and format. Editing an abstract for accuracy involves checking it to determine if it adequately and correctly describes the document. Editing for style and format includes evaluating it to determine whether or not it conforms to the rules and regulations of the *Government Printing Office Style Manual.* The style manual has been distributed to the clearinghouses by Central ERIC for use as a standard editing tool.

Indexing

The processing procedure continues when the document is returned to the document analyst for indexing. Indexing for ERIC consists of identfiying the important concepts in the document and selecting descriptor terms from the *Thesaurus of ERIC Descriptors* to represent the concepts. The document analyst selects from five to fifteen indexing terms which reflect the contents of the document. When a descriptor is needed which is not available in the *Thesaurus,* the analyst has the option of inputting the term as a candidate for entry into the *Thesaurus.* As a candidate term, the descriptor is evaluated by the professional staff of the Clearinghouse to determine its meaning, its relationships to other terms in the *Thesaurus,* and its utility and frequency of use in the literature. After the Clearinghouse staff has made a decision on the new descriptor term, it is typed on a Descriptor Justification Form (DJF) and submitted for further evaluation by the lexicography staffs of NAA and Central ERIC. If, after an exhaustive study of its meaning and utility by Central ERIC and NAA staffs, a term is justified for entry into the *Thesaurus,* the Clearinghouse staff is notified, and the term is listed in the next cumulative edition of the *Thesaurus.*

From ERIC and ERIC/CRIER's point of view, the selection of indexing terms is critical as the terms will serve later to retrieve the documents from the collection file. The success of any information system depends on how well the needs of the user groups are met in terms of completeness and relevance of information disseminated. Consequently, while indexing serves as the basis for reflecting the contents of a document, it serves also as the crucial storage and retrieval tool.

As with abstracting, the indexed document is sent to an indexing editor before undergoing further processing. Index editing involves checking each descriptor to determine if it is listed in the *Thesaurus,* evaluating the descriptors to determine if each represents important concepts discussed in the document, and initiating evaluation if descriptor candidate terms are indicated.

Preparing the Documents for Input to NAA

Following the editing of the indexing, the document is prepared for input to NAA. For each document in the input, a resume in triplicate, a paper tape, a proofed print-out, and a DJF form if needed, are typed on the Friden 2201 Flexowriter. The Flexowriter is an automatic writing machine which is the basic input unit for the ERIC system. The Friden Model 2201 Flexowriter consists of five basic components: a writing machine, code punch, a code reader, code translater, and code selectors. The operation of the machine is controlled both automatically (programmed) through the control panel and field switch rack and manually through the keyboard. In manual operation it is possible to type 200 words per minute. In automatic operation, the machine operates at approximately 145 words per minute. The Flexowriter operator utilizes both the manual and automatic operation of the machine in preparing the abstract resumes, paper tapes, and proofed print-outs. In typing the DJF for each new descriptor, the operator operates the Flexowriter manually. Subsequent to the typing of each resume and DJF, the operator uses the machine in the automatic mode of operation to produce the proofed print-outs for each document, while merging the individual documents into a single paper tape of approximately 25 documents.

When the final proofed print-out is completed, the Flexowriter operator packages the materials for mailing. This entails collecting the documents, the completed resumes, proofed print-outs of the resumes, DJF for each descriptor, and the merged paper tape of all documents scheduled for input. The resumes, proofed print-outs, and DJF are reproduced in triplicate on an automatic copier. Single copies of each are retained for the Clearinghouse file. The remaining copies are packaged, along with the merged paper tape of all documents scheduled for input, and sent to North American Aviation for further processing and eventual publication in *Research in Education.*

Operations similar to those described here are performed at regularly scheduled intervals at all ERIC clearinghouses and the input merged at NAA for the monthly issues of RIE. Input from the clearinghouses is maintained at a steady rate and approximately a three-month lag now exists between actual input of a document to NAA and its appearance in RIE. Both the quantity and quality of documents inputted from the clearinghouses are carefully controlled through the various stages of processing described here. A gradual increase in the quantity of documents flowing in from the clearinghouses has been maintained since beginning input. ■

SPINOFF FROM THE DIRECTOR

Recent Developments

In July 1967 new clearinghouses in the areas of English (NCTE), Library and Information Science (University of Minnesota), Educational Media and Technology (Stanford University), Educational Facilities (University of Wisconsin), and Early Childhood Education (University of Illinois) were added to the ERIC network. The new clearinghouses bring to 18 the number of documentation centers in the ERIC program. The "R" in the acronym formerly stood for *Research* and has recently been changed to *Resources* to indicate the broader scope of the program.

ERIC/CRIER is involved in a recent program initiated by the Division of Information Technology and Dissemination of USOE aimed at giving added attention to dissemination and interpretation of educational research results. Grants and contracts have been made for analysis and packaging of research findings in formats useful to audiences such as school board members, administrators, supervisors, and teachers. ERIC/CRIER will aid in the development of three monographs which will interpret recent research and innovative programs in reading. A national advisory board has been formed to define the audiences to be reached, identify topics, and aid in the development of the monongraphs. Professional writers have been contracted to write the series in a style readily assimilated by the intended audiences. The three monographs will be printed by the Government Printing Office at the conclusion of the one year contract. Dr. Carl Smith of the ERIC/CRIER staff is the Project Director.

In recent months documents from the ERIC Clearinghouses have begun to appear in the monthly publication *Research in Education.* In the past we have announced reading documents carried in RIE through the *Newsletter* or special *Information Briefs.* We will continue to do so until the volume becomes unmanageable. *Information Brief* 3, included with this Newsletter is devoted completely to reading documents in RIE. As input activities continue to grow other avenues of announcement will have to be developed.

The *ERIC/CRIER Newsletter* serves a valuable function and has been disseminated to about 4,000 people in reading. However, there is a need to reach a broader audience as information on ERIC activities and Clearinghouse output increases. Preliminary negotiations are underway to include a column on ERIC/CRIER as a regular feature of the IRA Journals, the *Reading Teacher,* the *Journal of Reading,* and the *Reading Research Quarterly.* The proposal will be presented at the October meeting of the Board of Directors and action taken on the resolution. With positive action, the columns could begin by early 1968 and provide an invaluable avenue of dissemination to the broad profession in reading.

The synthesis and analysis of information as well as the collection and organization of information is developing into one of the major activities of the Clearinghouse. The first comprehensive state-of-the-art monograph is in press and should be available by Boston convention time. *Trends and Practices in Secondary Reading: A Review of the Research*, by A. Sterl Artley, examines in comprehensive fashion the research accomplishments, trends, and needs in secondary reading using the research from the last decade as a data base. Indiana University Press will publish the monograph, and we'll keep users informed as to its progress. A second monograph in reading disability is in the final manuscript stage. One other manuscript is nearing completion, and two others have been commissioned. All will be published by the Indiana University Press over the next eighteen months.

In addition to contributing documents for *Research in Education*, the Clearinghouse has been active in developing several publications useful to educational researchers and practitioners. As announced in previous *Newsletters*, bibliographies of various types and state-of-the-art papers are in process. In addition, work continues on the development of a computerized retrieval system for tailor-made searches and selective dissemination. Four general bibliographies have been developed and inputted for dissemination in *Research in Education*. These should be announced over the next few months and will be available in microfiche or hard copy through the ERDS of Bell and Howell, 1700 Shaw Ave., Cleveland, Ohio 44112.

- James L. Laffey, "Recent Reviews and Bibliographic Resources for Reading Research," *ERIC/CRIER Reading Review Series*, Volume 1, Bibliography 1, August, 1967, 88pp. (Microfiche only.)

  Lists and abstracts 259 reviews, bibliographies, and summaries on reading research appearing in the professional literature since 1960. An author index is included.

- Edward G. Summers, "Recent Doctoral Dissertation Research in Reading," *ERIC/CRIER Reading Review Series*, Volume 1, Bibliography 2, September, 1967. 214pp. (Microfiche only.)

  Lists and provides an analytical abstract of 379 reading dissertations completed since 1960.

- Edward G. Summers, "International Reading Association Conference Proceedings Reports on Secondary Reading," *ERIC/CRIER Reading Review Series*, Volume 1, Bibliography 3, September, 1967. 28pp. (Microfiche and hard copy.)

  Lists 180 reports on secondary reading given at IRA Conventions and provides a brief annotation of the contents. The reports are classified under broad categories, and an author index is included.

- Larry A. Harris, "International Reading Association Conference Proceedings Reports on Elementary Reading," *ERIC/CRIER Reading Review Series*, Volume 1, Bibliography 4, October, 1967. 51pp. (Microfiche and hard copy.)

  Lists 345 reports on elementary reading given at IRA Conventions and provides a brief annotation of the contents. The reports are classified under broad categories, and an author index is included.

EOS

ERIC/CRIER STAFF ADDITIONS

ERIC/CRIER began its second year of operation June 1, 1967. On hand to plan and carry out an expanded Clearinghouse program and to initiate new activities were the Directors, Dr. Leo C. Fay and Dr. Edward G. Summers; Associate Director, Dr. James L. Laffey; Director of Documentation, Mrs. Bonnie Lewis; Document Analysts, Mrs. Mabel Culmer, Mrs. Ruth Houdeshal, and Mrs. Brenda Kolker; and Publications Coordinator, Mrs. Catherine Siffin.

Four staff additions or replacements joined ERIC/CRIER during the summer. Charles H. Davis, Assistant Editor of *Chemical Abstracts* from 1962-1965, is the new Director of Systems. Mr. Davis is now completing a computer tape of the published research literature in reading from 1950 to the present preparatory to beginning searches of the documents for specialized bibliographies structured according to a new reading classification matrix. He has also designed a basic algorithm for custom searches of reading documents in response to clientele questions. Mr. Davis is completing his doctorate in information science at Indiana University.

Miss Bonnie Maxwell received her M.A. in library science at I.U. this spring and immediately began work as Supervisor of Documentation, facilitating the flow of documents through the Clearinghouse and assisting in the abstracting and indexing stages. Miss Maxwell will also be involved in the systems problems in information retrieval at ERIC/CRIER.

Karen and Ron Johnson, pre-doctoral students in reading at the University of Minnesota, spent the summer at the Clearinghouse as Document Analysts, working on a special project to develop a multi-dimensional classification matrix for reading research. In the process of constructing this classification scheme, the Johnsons analyzed over 2,000 documents from the published literature in reading. They have returned to positions as reading supervisors in Minneapolis suburban schools.

Came the fall and came more new faces to the Clearinghouse. Dr. Larry A. Harris is the new Assistant Director for Operations. In addition to his administrative duties, Dr. Harris directs the ERIC/CRIER project on instructional materials in reading. The initial aim of the project is to develop a catalog of instructional materials, tests and evaluation instruments, and textbooks for teachers. Ultimately the catalog will be placed on a computer tape and special bibliographies prepared and specific questions on reading resources answered by a computerized search. Three hundred publishers of reading materials are actively participating in the project. Added note: Dr. Harris claims to be a Ripley "Believe it or Not" type—of *eight* seniors on his high school varsity basketball team, *four* received Ph.D. degrees. Just now the publications staff is wondering which is more remarkable: eight men on a basketball team or four potential Ph.D.'s!

Dr. Carl B. Smith of Dayton, Ohio, is heading a new manuscript project at ERIC/CRIER which will make reading research and innovations in reading available to the public. Three manuscripts for the layman will be prepared this year. Before coming to I.U., Dr. Smith taught in secondary schools, served as an editor of a primary grades reading series for Reardon, Baer and Company in Cleveland. This past year he was Assistant Director of an ESEA Title I Reading Study, lectured in the Department of Education at Western Reserve University, and was a Staff Instructor for an NDEA Overseas Reading Institute in Geneva, Switzerland. Dr. Harris and Dr. Smith are also on the reading program faculty at I.U.

Three new analysts have joined the document staff at ERIC/CRIER. All are working toward doctoral degrees in the College of Education at I.U. Sister M. Iona Taylor was an elementary teacher, principal, and reading coordinator prior to coming to I.U. She received her M.A. at Xavier University in Cincinnati, Ohio. Mrs. Natividad A. Santos comes from the Philippines and has worked in education there since 1952. From 1956 to 1967, she acted as a supervising instructor in the University Elementary School of the University of the Philippines. James M. Mimaki left Hilo, Hawaii, to study here. Last year he received his M.A. in elementary education at Sacramento State College. He was a member of a language arts team in secondary reading for the Hilo District Office of the Hawaii Department of Education from 1963-66 and is now on leave from the District Office.

The secretarial staff at ERIC/CRIER is directed again this year by Mrs. Margaret S. Taylor with the expert assistance of these new staff additions: Mrs. Norma McKesson, Lynn Everroad, and Patricia Wagner.

INFORMATION BITS. . .

The April issue of the ERIC/CRIER Newsletter carried an article on microfiche readers and reader printers which we forwarded to companies manufacturing or distributing this equipment. In return we asked them to send us their latest advertising on equipment. The feedback indicated that a number of companies make or distribute a portable or desk-top reader which may interest individual researchers: University Microfilms, Inc., Atlantic Microfilm Corp., Dukane Corp., Dietzgen, Bell and Howell, Microcard Corp., and Recordak. These portable or desk-top models are naturally campact—various models weigh nine, thirteen, fifteen, twenty-two, and thirty-three pounds. The smallest screen size described was 8" x 10" and the largest 9" x 13" and 12" x 10.5". Magnification ratios ranged from 17x to 22x. Prices varied from $99 to $150.

—eric/crier—

Microreader Manufacturing and Sales Corp. sent information on a "Microskaner" which as its name implies is a pocket-sized reader. It is operated by two standard penlight batteries, is 6¾" long, 2" high, and 1½" deep. The magnification is approximately 20x and the field of view ⅜". It retails for $15. According to the descriptive literature: "To read any material, it is necessary only to rest the Microskaner on its surface . . . and bring both up to the eye. This permits reclining while reading—no bending over or fatigue." Note the concern for the microfiche-r! The literature also reports that the lenses have been dropped experimentally from various heights "and will bounce rather than break."

—eric/crier—

Record keeping by American businesses parallels the accumulation of research findings by educational organizations. *Information and Records Management* reported in the 1967 February-March issue that U.S. business firms now store an estimated 1,000,000,000,000 (that many zeroes make a trillion!) pieces of paper records at an annual cost of one cent apiece. An estimated 250,000,000,000 (one-quarter trillion) pieces are added to this document collection each year. This does not include information recorded and stored in more sophsiticated forms.

If you find these figures a trifle overwhelming, you might try this verision from an IBM advertisement released at the same time: "American business adds 175 billion pieces of paper to its files . . . at a cost in storage, handling, and maintenance of five billion dollars" every year.

The "how-many" may depend on where you read it, but in either case the quantity of records is impressive!

—eric/crier—

Readers interested in a complete run-down on microfiche equipment should consult *Guide to Microreproduction Equipment* edited by Hubbard W. Ballou and published by the National Microfilm Association. The latest edition is dated 1965 with a yearly supplement in 1966 and 1967. A new edition is scheduled for 1968. The *Guide* is comprehensive and thorough. Sections include: Cameras, Readers, Reader/Printers, Processors, Contact Printers, Enlargers, Accessories and Miscellaneous, Specials, and Changes. Specifications and descriptions of each piece of equipment are given. For information, comparison shopping, or just an adventure into the wonderful world of microreproductive equipment, the *Guide* is an excellent tool.

—eric/crier—

This August, in response to requests for copies of 1966 and 1967 Information Briefs and Newsletters, ERIC/CRIER published a cumulative edition of these informational publications. We're particularly proud of its handsome, striking cover of ERIC/CRIER green (technically known as CF 30Y/22 ipi) and white with positive and negative images of the acronyms ERIC and CRIER. It is the work of Terry Gaughan, staff artist in the I.U. Publications Office. In addition to ERIC/CRIER brain trusters, a lot of people at the I.U. Publications Office have helped create our "corporate image" in publications: Bonnie O'Neill was the artist for the ERIC/CRIER symbol; Tom Kirkman designed the brochure, the Newsletter format, and Reading Review Series covers.

—eric/crier—

ERIC/CRIER ADVISORY BOARD

Wilmer Baatz
Indiana University

David K. Berninghausen
University of Minnesota

John R. Bormuth
University of Minnesota

N. Dale Bryant
State University of New York

Theodore Clymer
University of Minnesota

Myron L. Coulter
Western Michigan University

Brother Leonard Courtney
St. Mary's College

Margaret Early
Syracuse University

Douglas Ellson
Indiana University

Albert J. Harris
City University of New York

Jack A. Holmes
University of Calif., Berkeley

James Hubbell
Arthur Young & Co., Detroit

James Kerfoot
Wisconsin State University

Albert J. Kingston
University of Georgia

Roy Kress
Temple University

John Manning
University of Minnesota

Alton L. Raygor
University of Minnesota

George Spache
University of Florida

Ralph Staiger
International Reading Ass'n.

Directors: Leo C. Fay, Edward G. Summers

ERIC/CRIER NEWSLETTER

The ERIC/Clearinghouse on Retrieval of Information and Evaluation on Reading is a national clearinghouse to organize and disseminate significant research, information, and materials on reading to teachers, administrators, researchers, and the public. The Clearinghouse is a joint project of the International Reading Association and Indiana University in cooperation with the Educational Resources Information Center of USOE.

The *ERIC/CRIER Newsletter* is a publication of the Clearinghouse. The *Newsletter* is designed to collect information; inform users of current activities, services, projects, recent accessions; and act as a communications medium for the Clearinghouse. The *Newsletter* is issued three times a year: in November, February, and April.

THE ERIC/CRIER *NEWSLETTER* is:
Written by .....Dr. Leo C. Fay
Dr. Edward G. Summers
Edited by .....Mrs. Catherine F. Siffin

ERIC CRIER

INFORMATION BRIEF

Number 3 November, 1967

CURRENT READING RESEARCH

Research in Education has been issued monthly since November, 1966, by the U. S. Office of Education to provide up-to-date information about educational research sponsored by the Bureau of Research, USOE. Completed reports and on-going projects are catalogued, indexed, and abstracted in the monthly periodical.

Beginning in July, 1967, research documents input into the Central ERIC document collection by the decentralized clearinghouses are included in **Research in Education.** Nine reading research documents were input by ERIC/CRIER in May and appear in the July issue of RIE. Additional document inputs have been made each following month—to date, ninety reading documents have been input in the Central ERIC collection by ERIC/CRIER —and will appear in succeeding issues of USOE's periodical. Microfiche and hard copy reproductions of these reading reports are available by ED accession number from the ERIC Document Reproduction Service, Bell and Howell Company, 1700 Shaw Avenue, Cleveland, Ohio 44112. Prices are given with the document entry.

Readers may order subscriptions to **Research in Education** from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402 for $11.00 per year, domestic mailing, and $13.75, foreign mailing. Single copies are available for $1.00.

A listing of completed research reports and on-going projects relating to reading catalogued in the May, June, and July 1967 issues of **Research in Education** is given here for your information. Note that this listing indicates only the descriptive cataloging information for each entry. Entries in **Research in Education** also include a group of "descriptors" or index terms to characterize the substative content of the report or project and an informative abstract of about 200 words.

Completed Reports

ED 010 376
Relationship Between School-Community Coordinating Procedures and Reading Achievement.
By—Litwak, Eugene and others
Center for Advanced Study in Behavioral Sciences
Report Number BR-5-0355 Pub Date: 31 Dec 66
University of Michigan, School of Social Work
Report Number CRP-1796
Contract OEC-3-10-033
EDRS Price MF-$0.90 HC-$23.28 582 P.

ED 010 380
A Study of Approaches to First-Grade English Reading Instruction for Children from Spanish-Speaking Homes.
By—McCanne, Roy
State Dept. of Education, Denver, Colo.
Report Number CRP-2734 Pub Date: 66
Report Number BR-5-0476
EDRS Price MF-$0.45 HC-$10.80 270P.

ED 010 381
Effects of Age, Social Status, Sex, and Race Upon the Understanding of Word Meanings Independent of Sentence Context.
By—Crockett, Walter H.
Clark Univ., Worcester, Mass.
Report Number HRD-266-65 Pub Date: Nov 66
Report Number BR-5-0697
Grant OEG-5-85-081
EDRS Price MF-$0.09 HC-$1.48 37P.

ED 010 404
An Exploratory Study of Reading-Thinking Patterns Among Children of Varying Abilities.
By—Henderson, Edmund H. Long, Barbara H.
University of Delaware, Newark
Report Number BR-5-8075 Pub Date: 66
Report Number CRP-S-374
Contract OEC-5-10-440
EDRS Price MF-$0.09 HC-$1.40 35P.

ED 010 424
English for Reluctant Learners, Grades 7-9, English in Every Classroom.
By—Fader, Daniel N.
University of Michigan, Ann Arbor
Report Number BR-5-8413 Pub Date: Oct 66
Contract OEC-6-10-313
EDRS Price MF-$0.09 HC-$2.12 53P.

ED 010 431
Evaluation of the Contribution of Special Programs in the Washington, D.C., Schools to the Prediction and Prevention of Delinquency.
By—Dailey, John T.
George Washington Univ., Washington, D.C.
Report Number BR-6-1811 Pub Date: Aug 66
Contract OEC-2-6-061811-0575
EDRS Price MF-$0.18 HC-$2.92 73P.

ED 010 514
An Evaluation of the Inductive and Deductive Group Approaches To Teaching Selected Word Analysis Generalizations to Disabled Readers in Eighth and Ninth Grades.
By—Burmeister, Lou E.
Wisconsin Univ., Madison
Report Number BR-5-0216-TR-12 Pub Date: Nov 66
Contract OEC-5-10-154
EDRS Price MF-$0.09 HC-$2.04 51P.

ED 010 532
A Reading Program for Mexican-American Children. First Interim Report.
By—Amsden, Constance
California State College at Los Angeles
Report Number BR-5-0559 Pub Date: Oct 66
Report Number HRD-374
Contract OEC-6-85-070
EDRS Price MF-$0.27 HC-$6.28 157P.

ED 010 602
Effect of a Special Program in Literature on the Vocabulary and Reading Achievement of Second Grade Children in Special Service Schools.
By—Cohen, Dorothy H.
New York Univ., N.Y., Sch. of Education
Report Number CRP-S-254 Pub Date: 66
Report Number BR-5-8034
EDRS Price MF-$0.27 HC-$7.52 188P.

ED 010 606
The Effectiveness of Emphasizing Reading Skills in an English Course for Underachievers.
By—Emans, Robert
Chicago Univ., Ill.
Report Number CRP-S-252 Pub Date: 66

Report Number BR-5-8383
EDRS Price MF-$0.18 HC-$3.08 77P.

ED 010 615
Factors Affecting Learning to Read.
By—Hayes, Robert B. Wuest, Richard C.
Pennsylvania State Dept. of Pub. Instr., Harrisburg
Report Number BR-5-0572 Pub Date: Dec 66
New Caste Area Schools, Pa.
Report Number CRP-3124
Contract OEC-6-10-122
EDRS Price MF-$0.27 HC-$6.48 162P.

ED 010 644
A Study of the Relative Effectiveness of Three Methods of Teaching Reading in Grade One.
By—Hahn, Harry T.
Oakland County School, Pontiac, Mich.
Report Number CRP-2687 Pub Date: 65
Report Number BR-5-0491
EDRS Price MF-$0.18 HC-$3.36 84P.

ED 010 670
Development of Inter-American Test Materials.
By—Manuel, Herschel T.
Texas Univ., Austin
Report Number CRP-2621 Pub Date: Dec 66
Report Number BR-5-1017
Contract OEC-5-1017
EDRS Price MF-$0.18 HC-$4.36 109P.

ED 010 688
Some Sources of Reading Problems for Negro Speakers of Non-Standard English.
By—Labov, William
Pub Date: 5 Mar 66
EDRS Price MF-$0.09 HC-$1.50 40P.

ED 010 752
A Job Corps Center Reading Program.
By—Fry, Edward
Pub Date: Dec 66
EDRS Price MF-$0.09 HC-$0.88 22P.

ED 010 753
A Study of Dropouts from Adult Literacy Programs.
By—Nicholson, Eunice Otto, Wayne
Pub Date: Dec 66
Contract OEC-5-10-154
EDRS Price MF-$0.09 HC-$0.60 15P.

ED 010 754
Adult Book Reading in the United States, A Preliminary Report.
By—Ennis, Philip H.
Chicago Univ., Ill., National Opinion Research Ctr
Report Number 105 Pub Date: Sept 65
EDRS Price MF-$0.18 HC-$4.52 113P.

ED 010 755
The Reading of the Culturally Disadvantaged.
By—McCrossan, John
Illinois Univ., Urbana, Grad Sch. of Lib. Science
Report Number OP-80 Pub Date: Oct 66
EDRS Price MF-$0.09 HC-$1.68 42P.

ED 010 756
The Readibility of Science Textbooks for Elementary School.
By—Newport, John F.
Pub Date: Oct 65
EDRS Price MF-$0.09 HC-$0.24 6P.

ED 010 757
An Annotated Bibliography of Selected Research Related to Teaching Reading in the Secondary School, 1900-1960. Preliminary Draft.
By—Summers, Edward G.
Pittsburgh Univ., Pa., School of Education
Pub Date: 3 Sep 63
EDRS Price MF-$0.27 HC-$7.68 192P.

ED 010 758
An Annotated Bibliography of Selected Research Related to Teaching Reading in the Secondary School, Supplement 1961-1963. Preliminary Draft.
By—Summers, Edward G.
Pittsburgh Univ., Pa., School of Education
Pub Date: Sept 64
EDRS Price MF-$0.09 HC-$1.36 34P.

ED 010 759
Young Adults Ten to Fifteen Years After Severe Reading Disability.
By—Balow, Bruce Blomquist, Marlys
Pub Date: Oct 65
EDRS Price MF-$0.09 HC-$0.28 7P.

ED 010 760
Programed Tutoring—A Teaching Aid and a Research Tool.
By—Ellson, D.G. and Others
Pub Date: 65
EDRS Price MF-$0.09 HC-$2.16 54P.

Projects in Progress

EP 010 559
The Development of Auditory Discrimination Relationship to Reading Proficiency and to Social Class.
Investigator—Deutsch, Cynthia P.
New York Univ., School of Education
Bureau Number BR-6-3034 Prop Date: 66
Contract OEC-1-7-063034-1575
Start Date 07-01-66 End Date 06-30-67

EP 010 567
Research Conference on the Problem of Dyslexia and Related Disorders in Public Schools of the United States.
Investigator—Zedler, Empress Y.
Southwest Texas State College, San Marcos
Bureau Number BR-7-8270 Prop Date 05 Dec 66
Grant OEG-4-7-078270-2684
Start Date 01-16-67 End Date 08-17-67

EP 010 570
The Distinction Between Controlling Eye and Dominant Eye and The Effect of Both With Dominance on Reading Achievement.
Investigator—Hillerich, Robert L.
Community Consolidated Sch. Dist. 34, Glenview, Ill.
Bureau Number BR-7-E-046 Prop Date 05 Oct 66
Grant OEG-3-7-070046-2896
Start Date 02-09-67 End Date 11-08-67

EP 010 635
Multi-Variable Comparison of Structural Reading Program and Enriched Basal Reading Program with Disadvantaged Urban Children.
Investigator—Youtz, Adella C. Putnam, Lillian
Newark State College, Union, N.J.
Bureau Number BR-7-8079 Prop date 29 Jul 66
Grant OEG-1-7-078079-3085
Start Date 03-01-67 End Date 06-30-68

EP 010 669
The Relationship of Measures of Attainment Value and Achievement Expectancy to the Reading Achievement of First-Grade Children from Low-Income Families.
Investigator—Wood, Frank H.
Minnesota Univ., Minneapolis
Bureau Number BR-7-8111 Prop Date Aug 66
Contract OEC-3-7-078111-3137
Start Date 04-01-67 End Date 09-30-67

Investigator—Loutz, Adella C. Putnam, Lillian

ERIC CRIER NEWSLETTER

VOLUME 2, NUMBER 2 FEBRUARY, 1968

DEVELOPING A MULTIDIMENSIONAL CLASSIFICATION MATRIX FOR ORGANIZING AND SEARCHING READING LITERATURE

As the ERIC system develops, the document collections at the individual clearinghouses continue to grow. Information from these collections will eventually be available in addition to that announced in the ERIC monthly publication *Research in Education*. The last *Newsletter* described in detail the processing cycle for input of clearinghouse materials to *RIE*. Each clearinghouse has the option of developing various strategies for organizing its internal files for retrieval for various purposes. This article describes the development and use of the ERIC/CRIER classification concept to produce information products on reading.

The ERIC/CRIER program is moving along a number of paths to make various kinds of information more readily available to a wide variety of users. An extensive acquisition program has been developed to locate and acquire documents to be included in the file for eventual analysis and dissemination. The holdings of the Clearinghouse are made available in two ways—announcement in the ERIC publication *Research in Education* and through activities and publications of ERIC/CRIER. The *ERIC Thesaurus* is used to index the documents contributed for announcement in *RIE* so that they can be organized and eventually retrieved. In addition to contributing to *RIE*, the ERIC clearinghouses have produced a number of output products. The Clearinghouse on Reading has produced bibliographies cutting across the document collection which provide useful general information on reading including completed dissertations, bibliographies and reviews, conference proceedings, USOE sponsored research, and materials from the published research literature. There is a need to continue development of useful bibliographies on broad topics in reading which provide the user with a set of references which he can search and organize depending on his individual need for information. What is needed to effect this type of information retrieval is a general classification scheme which organizes the document collection under broad categories that reflect the general focus or intellectual content of the documents. The resulting classification scheme is not as comprehensive as a complete indexing system, such as the coordinate indexing approach used in the *ERIC Thesaurus*. It is more akin to the conventional library classification scheme such as the Dewey or Library of Congress system. However, it differs from the conventional library system in that it lacks the possibility for subclassification. The type of classification system needed approximates most closely the table of contents found in the conventional textbook except that it is organized in discrete units which facilitate random access. The development of the classification matrix is organized in three phases.

Phase I

To form a file for the experimental development of the classification matrix, approximately 2,000 documents from the published research literature on reading for the period 1956 to 1966 were selected. The source of documents was the annual summary of research on reading, produced by the Reading Research Center of the University of Chicago, and better known as the Gray collection. With the complete corpus of experimental documents defined, the next step involved organizing the documents under broad categories which could be used to classify the major focus of each document. The headings could have been generated completely empirically by reviewing the documents and conducting a listing, sorting process. However, it was decided at this point that much of the intellectual labor involved in developing a general classification scheme had already been accomplished in the production of the annual summary. For example, in the production of a single year of the summary, professionals in reading had taken 150 documents, assiduously analyzed them as to their focus, and organized them using a number of major categories with subdivisions resulting in a table of contents. It was decided that it would be impossible for the Clearinghouse staff to develop a more effective classification strategy, and the table of contents for each yearly summary was used as a basis for the resulting analysis. The table of contents for each year varies slightly across the ten year span and ranges from twenty-five to over thirty-five headings and subheadings. The job performed by the ERIC/CRIER staff was to collate *across* the tables of contents for the ten years and develop a series of 48 broad categories reflecting the cumulative contents of all the years in the annual summaries. At this point two other dimensions were added to the classification scheme. Grade level and the major process or operation inherent in the document were added to make a three dimensional classification matrix. The 48 headings were then reviewed and minor adjustments made. The three dimensional matrix was then used to classify the 2,000 documents and revised again during classification. One final step remained in this phase. The 2,000 documents were published research articles on reading and not necessarily totally representative of the broad universe of documents from the reading field. Because of this, the classification scheme is also being used to classify documents with other than a straight research orientation. Notice at this point that the tense in reporting has shifted from the past to the present. The ERIC/CRIER staff has completed most of Phase I and is currently involved in completing the classification of the Master File with 80% of the total collection now classified. The description which follows shifts to future

tense and outlines the remaining tasks to be accomplished in Phases II and III.

Phase II

After the complete Master File has been classified, a bibliography will be produced for each of the 48 categories which will include all the materials classified under that category. All citations in the Master File are stored on magnetic tape with a code affixed for each document and can be manipulated through special computer programs. In classifying the documents, each entry has been placed under a number of categories. No report deals exclusively with just one topic. Each document has to be classified under several headings to insure that it will appear where it should. Although complete statistics are not yet available, it now appears that any one document may be classified under an average of four to six categories depending on the content. Thus, some repetition of citations will appear in the bibliographies. This is to be expected as there is a great deal of interrelatedness among topics in reading. Once the bibliographies for each category are available, their contents will be analyzed and further adjustments made. At this point the classification matrix will undergo a final cleaning up to eliminate any inaccurate classification which may have occurred during the initial analysis. A one paragraph definition of each of the 48 categories will then be written which precisely defines, with include and exclude statements, the contents and scope of that category.

Phase III

In this phase the availability of the bibliographies will be advertised and feedback from the user group solicited to further refine and improve the classification matrix. The contents of the Master File can be updated as additional documents become available. Bibliographies can be produced on single categories and also reflect grade level or operational and process emphasis. Special searches can also be made combining documents across several categories. The REDLARS (Reading Literature Analysis and Retrieval Service) program will be initiated in ERIC/CRIER to handle this phase of the project. The classification matrix can also be used to begin work on a more detailed thesaurus of reading terminology. Sets of descriptor terms can be developed for each category and subdivisions within each category generated. The classification matrix will also be interfaced with the *ERIC Thesaurus* so that this indexing tool for the broad field of education adequately reflects the needed terminology to describe reading documents.

Work on the development and improvement of the multidimensional classification scheme will continue throughout the remainder of the second contract period. Once general and special bibliographies are completed, they can be made readily available through announcement in *Research in Education*. A number of trial runs have been made on the incomplete listings in the Master File, and the bibliographies produced on a number of categories indicate this will be a very useful tool for reading literature analysis and retrieval. In classifying documents, a broad view of the contents is deliberately taken. The eventual intent is to supply the user with a list of documents related to his topic. The list will include documents which are obviously relevant and some which may be only peripherally related. The user will make the ultimate decision in analyzing the bibliography as to which citations are most related to his purpose. It would take considerable expense and effort to develop for the user the level of specificity he can bring to bear and have it operate in a retrieval service. To insure that the user has the opportunity to make decisions about peripheral documents, the classification is deliberately applied in a somewhat liberal fashion under the assumption that it is better to err in the direction of providing some irrelevant citations that can be weeded out than to err in the direction of not including citations that the user should have brought to his attention so that he can make relevance decisions about them.

With continued application and refinement, the multidimensional classification matrix should prove to be a valuable ERIC/CRIER resource. It can perform a useful organization function for reading literature and also contribute in the evolution of the *ERIC Thesaurus*. The ultimate utility will be determined by the value of the bibliographies and services to the user group. ■

ERIC/CRIER ADVISORY BOARD

As most readers know, the Clearinghouse on Reading has involved a highly capable group of professionals to serve in an advisory capacity in its first year of operation. The Advisory Board performed an important role and contributed much to developing the concepts underlying the activities of the first year and establishing general policy guidelines. A somewhat revised and expanded Board will meet at Indiana University in early March for a second conference to review and evaluate past progress and chart new directions for the Clearinghouse. A lively, stimulating session always results when this group is brought together, and this year's meeting should be no exception.

OFFICE OF EDUCATION RESEARCH REPORTS

Would you like information on reports of research projects completed under USOE Bureau of Research funding since the inception of the program in 1956? ERIC has just produced a new two-volume publication which should aid teachers, administrators, research specialists, and other interested users in the educational community in making better use of available research results. *Office of Education Research Reports, 1956-65, Resumes,* (OE-12029, $1.75) and *Office of Education Research Reports, 1956-65, Indexes* (OE-12028, $2.00) can both be ordered from: Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402. These two documents provide information on 1,213 projects sponsored by the Bureau of Research, U.S. Office of Education, primarily under the Cooperative Research Program. These publications, along with *Research in Education,* provide access to information on reports of all past, recently completed, and ongoing research projects sponsored by USOE.

If the user is interested in obtaining complete copies of any of the reports, prices for microfiche and hard copy are included along with the accession number required for ordering from the ERIC Document Reproduction Service. A complete microfiche set of the 1,213 documents listed can be purchased for $280.00. Approximately $250.00 will purchase a reasonably good microfiche reader. Thus, for around $525.00, a library, School of Education, school district, or research unit can have quick access to the important USOE research reports on a demand basis. The addition of a subscription to *Research in Education* and a continuing order for all documents announced in microfiche, provide a means of updating the collection on a systematic basis. Some units may wish to build a partial collection by browsing the resumes and ordering only the most pertinent reports for their purposes. In any event, the publication of this collection provides ready access to a unique and extremely useful tool in educational research.

The 1,213 reports total over 177,000 pages. If the reports were stored on shelving in their original form it would require a minimum of fifty running feet of shelf space to house the collection. With microfiche reproduction, the collection can be stored in less than three feet of running shelf space or about one and one-half drawers in a special microfiche file cabinet. In addition to its low price and utility, microfiche offers substantial savings in storage space.

SPINOFF FROM THE DIRECTOR

A Note on Using the ERIC System

It's no secret among information scientists that even after information becomes more readily available, through implementation of services, many potential users do not take advantage of the system or do not bother to keep adequately informed about changes and improvements in the system. ERIC/CRIER recently experienced this phenomenon in a small way. In the June issue, we announced that one of the first products in the *Reading Review Series,* "Recent Reviews and Bibliographic Resources for Reading Research," had been completed and was available on request from the Clearinghouse. Total result—less than one hundred requests for the publication out of a total of 4,000 recipients of the *Newsletter!* The nature of the bibliography and the need for such a publication led us to anticipate a far greater demand. We are still convinced that many people would find it invaluable *if* only they knew about it.

As ERIC continues to grow, the need for communicating information about its services and products, and procedures for taking advantage of them, will grow. It's paradoxical that an information service may be its own worst advertiser. Even with highly geared advertising campaigns, news about services and products still does not get through to the user group. Word of mouth and individual contact are still excellent means of spreading the word. We rely on people in education to make ERIC known. In implementing the ERIC system, ask yourself, as an interested user, the following sample questions:

1. Does my library, school administrator, purchasing agent, or department head know what *Research in Education* is, how to obtain it, and where to place it so that it can be of maximum use?
2. Do my staff members, faculty, or colleagues understand the overall ERIC concept, the objectives of the program, and some of the current services offered? Do they know how they can contribute to the ERIC system?
3. Do my students, graduate and undergraduate, understand the ERIC concept, the need for improving information services in education, and the role of ERIC in the educational community?
4. Are the products of ERIC, such as the collection on the disadvantaged or the historical collection, generally known among the groups in education with whom I have contact? Are people puzzled about how to find out more about ERIC or how to get involved as users?

These are just a few sample questions on implementation that seem to have utility across the broad user group. Can you add more? As you try to make ERIC better known, contact us if you need promotional or informational material on the activities and products of ERIC/CRIER. Let's reduce the "utilization gap."

E.G.S.

CLEARINGHOUSE REVIEWS

As part of the evaluation of the ongoing ERIC system, a series of reviews were conducted by Central ERIC and staff members of the operational ERIC units in October and November. The purpose of the reviews was to identify accomplishments and strengths; pinpoint future plans and needs; solve operational problems; and tighten up the acquisition, internal processing, retrieval, analysis and dissemination, and provision of services across the whole ERIC system. The reviews served an important function and should facilitate across-system communication and effort as well as aid the individual clearinghouses in improving operations. ERIC/CRIER's review enabled the staff to conduct a thorough evaluation of the current and future program and receive feedback from Central ERIC on specific topics such as: services of the Clearinghouse including information analysis products; relation with associated professional groups; acquisitions program and internal processing; future plans; and internal operation. On the whole the reviews were quite informative and helpful and provided the ERIC system with an in-depth look at its total operation.

EXPANSION IN DISSEMINATION

In the past, the major means of announcing ERIC/CRIER products and disseminating information on reading documents in the ERIC system has been through this *Newsletter* and the associated *Information Brief.* These publications were never intended to reach the total group of users who might have need for access to the information in ERIC and wish to be kept informed about activities and products of ERIC/CRIER. An important step was taken by the International Reading Association Board of Directors at its October meeting which makes a new avenue of secondary dissemination available to the Clearinghouse. The Board passed a resolution making it possible for ERIC/CRIER columns to appear as regular features in the journal publications of IRA. The staff of the Clearinghouse began tooling up immediately for this new task, and the first regular columns appeared in the January issues. Dr. Larry Harris, Assistant Director, is authoring the column for *The Reading Teacher;* and Dr. James Laffey, Associate Director, is writing the column for the *Journal of Reading.* Both will collaborate for the *Reading Research Quarterly* column. The columns will focus on announcing ERIC and ERIC/CRIER products and provide information on activities of the ERIC system and information systems in general. Both authors are already faced with the problem of having more information to disseminate than room in which to print it! Therefore, the columns will be selective in announcing the most significant information of interest to the wide subscriber group for each journal. The columns will become the major means of reaching the broad reading profession, and the staff of the Clearinghouse welcomes the opportunity to utilize this avenue of dissemination. Look for information on ERIC and ERIC/CRIER in the continuing journal columns.

Information Bits . . .

The National Microfilm Association has reprinted for separate distribution an excellent survey of microfiche readers and reader-printers currently manufactured in the United States. The seventeen page review of microfiche equipment first appeared in the *NMA Journal* and is available now to interested inquirers from:

The Executive Secretary
National Microfilm Association
250 Prince George Street P.O. Box 386
Annapolis, Maryland 21404

A person requesting a copy should *send* fifty cents *with his order* (stamps are acceptable); single copies cannot be billed. Reprints in quantity (100 copies or more) are discounted 10%.

The survey includes an introductory essay about microfiche, an explanation of the format of the survey, and detailed information about the various equipment covered. November 1, 1967, was the cut-off date for availability of equipment; data was supplied by manufacturers and distributors and edited for a standardized format by NMA.

—eric/crier—

The November *ERIC/CRIER Newsletter* directed readers' attention to the *Guide to Microreproduction Equipment* and its annual *Supplements* edited by Hubbard W. Ballou and published by NMA. The *Guide* covers the *whole field of microreproduction equipment*—this survey is limited to microfiche readers and reader-printers and was made primarily to be of service to those who wish to read and use microfiche. The survey should be especially useful to ERIC clientile.

—eric/crier—

ERIC/CRIER has published its first computer printoff volume, *Published Research Literature in Reading, 1950-1963.* The process was: from the annual printed summaries of reading research to paper tape to punched cards to magnetic computer tape to a continuous-form master to the multilith machine to a completed volume! *Published Research Literature in Reading, 1950-1963* (ED 012 834) is now available from the ERIC Document Reproduction Service in microfiche, $1.50 and hard copy $15.92. The complete abstract follows:

> **This bibliography presents 1,913 citations and annotations on published research literature in reading taken from the annual summaries of investigations in reading compiled on a yearly basis by the Reading Research Center of the University of Chicago. The citations from the annual summaries for 1950-1963 were transferred to magnetic tape which was used to generate a special master for multilithing the publication. Complete bibliographic data for the journal sources used to compile the listing are given. The entries are arranged alphabetically by author in yearly segments. The bibliography covers the complete reading spectrum from preschool to college and adult years and presents research on all aspects of reading, including physiology, psychology, sociology, and the teaching of reading. Complete information on the development of the bibliography is included.**

In process at ERIC/CRIER now are publication of the reading research summaries for the period 1900-1949 and for the period 1964-1966. The citations and one-line annotations are being punched preparatory to production of magnetic tape and continuation of the publishing process outlined above. These volumes will be completed this spring and announced in ERIC's *Research in Education.* They will then be available by ED number from EDRS.

—eric/crier—

Things other than skirts come in mini versions. Data Reproduction Systems recently sent us descriptive literature on its "Mini-Reader" a small, compact portable micro-reader weighing 2½ pounds and 9" x 9" x 7" in size. It is part of the Model TF series and retails for $79.50. Details can be obtained from the company: Data Reproduction Systems, 300 E. Beach Avenue, Inglewood, California 90302.

—eric/crier—

Now available is the *Educator's Complete ERIC Handbook,* Prentice Hall Inc., Englewood Cliffs, New Jersey, 1967. The *Handbook* provides a listing and a descriptive resume for each of the 1,740 projects on the disadvantaged and culturally deprived which were generated in twenty-three community programs operating in the larger cities of the nation. The *Handbook* is indexed for quick access to material and includes order number and prices for hard copy and microfiche reproduction of all the reports. The projects reported in the *Handbook* are from the ERIC collection on the disadvantaged. The printed format, indexes, and overall organization make this a very useful reference tool for schools, libraries, and individuals interested in this topic, and make a wealth of information readily available. The price of the volume is $29.95.

—eric/crier—

ERIC DOCUMENT REPRODUCTION SERVICE

Microfiche users please note an important change: the ERIC Document Reproduction Service (EDRS) is now being operated by The National Cash Register Company. Effective immediately, all requests for documents or correspondence concerning such documents should be addressed to:

EDRS
The National Cash Register Company
4936 Fairmont Avenue
Bethesda, Maryland 20014

Note also that the prices for microfiche have changed. The cost per fiche for individual titles is now 25¢. The new price applies to documents ordered now although they may have been announced in 1966 or 1967 issues of *Research in Education.* To compute the cost of individual microfiche announced prior to January 1, 1968, use the following table:

IF PREVIOUSLY PUBLISHED (MF) PRICE WAS	USE THIS NEW PRICE	IF PREVIOUSLY PUBLISHED (MF) PRICE WAS	USE THIS NEW PRICE
$.09	$ .25	$.54	$1.50
.18	.50	.63	1.75
.27	.75	.72	2.00
.36	1.00	.81	2.25
.45	1.25	.90	2.50

etc.

Microfiche prices for Standing Orders (all ERIC documents) have been reduced from the former contract price of $.09 to $.08.4. Additional detailed pricing information may be obtained from The National Cash Register Co. at the address listed above.

ERIC/CRIER NEWSLETTER

The ERIC/Clearinghouse on Retrieval of Information and Evaluation on Reading is a national clearinghouse to organize and disseminate significant research, information, and materials on reading to teachers, administrators, researchers, and the public. The Clearinghouse is a joint project of the International Reading Association and Indiana University in cooperation with the Educational Resources Information Center of USOE.

The *ERIC/CRIER Newsletter* is a publication of the Clearinghouse. The *Newsletter* is designed to collect information; inform users of current activities, services, projects, recent accessions; and act as a communications medium for the Clearinghouse. The *Newsletter* is issued three times a year: in November, February, and April.

THE ERIC/CRIER *NEWSLETTER* is:
Written by .....Dr. Leo C. Fay
Dr. Edward G. Summers
Edited by .....Mrs. Catherine F. Siffin

ERIC CRIER

INFORMATION BRIEF

Number 4 February, 1968

PUBLICATION ON *PACE* PROJECTS

Central ERIC has recently issued another important package of materials for the educational community. *Pacesetters in Innovation, Fiscal Year 1966* presents information on Projects to Advance Creativity in Education (PACE) approved during fiscal year 1966. The PACE Program is authorized and funded under Title III, Supplementary Centers and Services, of the Elementary and Secondary Education Act of 1965. (PL 89-10)

Pacesetters in Innovation is a compilation of descriptive resumes and indexes of the 1,075 planning and operational projects funded during the second year of the PACE program. The volume (OE-20103) may be ordered for $2.50 from: Supt. of Documents, U. S. Govt. Printing Office, Washington, D.C. 20402. Microfiche or hard copy reproductions of the individual project proposals are available from EDRS, The National Cash Register Co., 4936 Fairmont Avenue, Bethesda, Maryland 20014.

Approximately six percent of the PACE projects have focused either partly or entirely on improving reading instruction. They are reported here for your information. Included is the ES accession number which is the key for ordering microfiche or hard copy reproductions, the price, page numbers, educational agency authoring the project, and a one-line annotation of the project.

ES 000 003 EDRS price: MF $0.50 HC $2.36 59p.
Laboratory Center for Reading
Va., Newport News, City School Board
Reading center with remediation and inservice.

ES 000 018 EDRS price: MF $0.25 HC $0.72 18p.
Northwest Indiana Elementary and Secondary School Cooperative
Ind., Valparaiso, Community Schools
Reading center with remediation, inservice, and materials center.

ES 000 038 EDRS price: MF $0.25 HC $1.08 27p.
Educational Media and Service Center
Hawaii, Honolulu, Dept. of Education
Provide library and instructional resources.

ES 000 040 EDRS price: MF $0.25 HC $0.84 21p.
Alton Area Instructional Materials, Resource and Demonstration Center
Ill., Alton, Community Unit Sch. Dist. 11
Reading center with remediation, inservice, and materials center.

ES 000 057 EDRS price: MF $0.50 HC $2.88 72p.
Supplementary Education Center
Ohio, Cleveland, Board of Education
Materials center for remedial reading and other subjects.

ES 000 066 EDRS price: MF $0.25 HC $1.80 45p.
Mobile Remedial Reading Laboratory
Maine, Kennebunk, School Dept.
Mobile remedial reading laboratory.

ES 000 067 EDRS price: MF $0.25 HC $1.12 28p.
Summer School for Dropout Recovery
Calif., Santa Ana, Orange County Supt of Schools
Summer program for high school dropouts.

ES 000 075 EDRS price: MF $0.25 HC $1.72 43p.
Exemplary Reading Clinic Program Utilizing an Array of Innovative Approaches
Calif., Riverside, Unified School District
Remedial reading and inservice demonstration center.

ES 000 081 EDRS price: MF $0.50 HC $3.00 75p.
Reading Clinic Service and Training
Nebr., Omaha, City School District
Reading clinic, inservice, and demonstration center.

ES 000 090 EDRS price: MF $0.25 HC $1.16 29p.
Planning for a Program of Exemplary Educational Services For the Amherst School District
N.Y., Buffalo, Amherst Central H. S. District 1
Exemplary program of educational services.

ES 000 099 EDRS price: MF $0.25 HC $1.32 33p.
Geauga County Area Educational and Cultural Center
Ohio, Chardon, Geauga County Board of Education
Educational and cultural center.

ES 000 102 EDRS price: MF $0.25 HC $0.64 16p.
Curriculum planning
Mo., Anderson, McDonald County Reorg. School R-1
Curriculum planning and materials center.

ES 000 112 EDRS price: MF $0.25 HC $1.20 30p.
Billings Extended School Year—Grades 1-12
Mont., Billings, Sch Dist 2, Yellowstone County
Summer remedial reading and enrichment center.

ES 000 115 EDRS price: MF $0.25 HC $0.52 13p.
Community-Wide Multidisciplinary Program Designed to Reduce Underachievement in the Primary Grades
N.J., Ridgewood, Board of Education
Multidisciplinary remedial center.

ES 000 117 EDRS price: MF $0.25 HC $2.04 51p.
Interdisciplinary Multi-Facet Reading Program
Ohio, Grove City, South-Western City Sch Dist
Interdisciplinary multifaceted demonstration reading program.

ES 000 138 EDRS price: MF $0.25 HC $0.96 24p.
Tutorial Instruction for Underachieving Readers and Writers
Utah, Logan, City Board of Education
Tutorial program in reading and writing.

ES 000 145 EDRS price: MF $0.25 HC $1.08 27p.
South Kingston School Development Program
R.I., Wakefield, South Kingston School Dept
A school program in organization and curriculum development.

ES 000 165 EDRS price: MF $0.25 HC $0.84 21p.
Regional Reading Development Center
Wash., Bothell, Northshore Sch Dist 417
An education center for reading and remedial specialists.

ES 000 198 EDRS price: MF $0.25 HC $1.40 35p.
Demonstration-Research Center Using the Initial Teaching Alphabet
Calif., Stockton, Unified School District
A demonstration and research center for the Initial Teaching Alphabet.

ES 000 200 EDRS price: MF $0.25 HC $0.84 21p.
Screening for Potential Reading Difficulties
Calif., Fresno, City Unified School District
A reading center designed for the screening of students with brain dysfunctions.

ES 000 207 EDRS price: MF $0.25 HC $1.32 33p.
ITA Demonstration Center and the Development. Testing and Demonstration of a Language Arts Curriculum for Grades 2 through 6.
Pa., Bethlehem, Area School District
Demonstration center for the Initial Teaching Alphabet and Language Arts curriculum development.

ES 000 208 EDRS price: MF $0.25 HC $1.60 40p.
Use of the School Library as a Community Resource for Instruction and Related Activities
Pa., Bethel Park, Sch Dist of the Borough
Development of the school library as an educational community resource.

ES 000 212 EDRS price: MF $0.25 HC $0.64 16p.
Survey and Evaluation to Determine the Educational Needs of the Area
Pa., Butler, County Board of School Directors
An evaluation center designed to survey the needs of several school districts.

ES 000 216 EDRS price: MF $0.25 HC $2.36 59p.
Supplementary Educational Center
Mass.,Worcester, Public Schools
A resource center for inservice and remedial instruction.

ES 000 234 EDRS price: MF $0.25 HC $0.76 19p.
Non-Basal Textbook Reading Program
Va., Hampton, City School Board
A non-basal textbook reading program.

ES 000 298 EDRS price: MF $0.25 HC $0.92 23p.
Area Developmental Reading Center
Mich., Muskegon, Area Intermediate School District
A reading center for inservice and remedial teaching.

ES 000 307 EDRS price: MF $0.25 HC $1.32 33p.
Northwest Educational Complemental Center
Mo., Hazelwood, Pattonville R-3 Sch. Dist.
A multi-purpose center for materials, resources, and educational services.

ES 000 379 EDRS price: MF $0.25 HC $1.04 26p.
Developing a Pilot Reading Program
Ga., Sandersville, Washington County Bd of Educ
A center for the diagnosis and remediation of reading difficulties.

ES 000 426 EDRS price: MF $0.25 HC $0.84 21p.
Personalized Reading Instructional Materials Center
N.J., Chester, Township Board of Education
A pilot program in the development of personalized reading.

ES 000 430 EDRS price: MF $0.25 HC $0.96 24p.
Electronic Program Laboratory
Mass., Millis, Public Schools
An electronic programed laboratory for teaching selected language arts skills.

ES 000 445 EDRS price: MF $0.25 HC $1.12 28p.
Exemplary Center for Reading Instruction
Utah, Salt Lake City, Granite School District
Exemplary program in reading instruction.

ES 000 483 EDRS price: MF $0.25 HC $1.72 43p.
Planning a Program and Services For a Model Intermediate School
Pa., Mechanicsburg, Cumberland Valley Sch Dist
A program for the development of a model school.

ES 000 521 EDRS price: MF $0.25 HC $0.96 24p.
Find Your Own Place
La., Gretna, Jefferson Parish School Board
A remedial program for underachievers and potential dropouts.

ES 000 540 EDRS price: MF $0.25 HC $0.76 19p.
Dual Enrollment Reading Center
Colo., Durango, School District 9-R
A special program for reading enrichment.

ES 000 544 EDRS price: MF $0.25 HC $1.28 32p.
Proposal to Plan Remedial and Clinical Services to Jefferson County Children with Learning and Emotional Problems
Ind., Madison, Consolidated Schools
A reading center for remedial and clinical services.

ES 000 563 EDRS price: MF $0.50 HC $2.48 62p.
Regional Reading Development Center
Wash.,Bothell, Northshore Sch Dist 417
A center designed for inservice and other services in developmental and remedial reading.

ES 000 574 EDRS price: MF $0.50 HC $3.64 91p.
Development of a Center to Demonstrate an Exemplary Individualized Reading Program
Calif., San Rafael, Dixie School District
A demonstration center for the development of an individualized reading program.

ES 000 637 EDRS price: MF $0.25 HC $1.36 34p.
Southwest Missouri Educational Improvement Center
Mo., Webb City, R-7 School District
A curriculum center for the improvement of language arts and mathematics instruction.

ES 000 663 EDRS price: MF $0.50 HC $2.88 72p.
South Bronx Multi-Purpose Supplementary Educational Center
N.Y., Brooklyn, Bd of Educ. City of New York
A multi-purpose supplementary educational center.

ES 000 667 EDRS price: MF $0.25 HC $1.72 43p.
Student Personnel Service Center
Ohio, Fremont, Sandusky County Schools
A service center for public and nonpublic students.

ES 000 691 EDRS price: MF $0.25 HC $1.68 42p.
Planning Coordination of Regional Services under ESEA of 1965
Pa., Scranton, Lackawanna County Board
Coordination center for planning educational programs.

ES 000 702 EDRS price: MF $0.50 HC $3.00 75p.
West Kentucky Project for Development and implementation of Innovative Curriculum Programs
Ky., Paducah, Independent School District
Project for the development of innovative curriculums.

ES 000 729 EDRS price: MF $0.25 HC $1.60 40p.
Flintridge Center
Ohio, Heath, City School District
A demonstration center for reading mathematics and the performing arts.

ES 000 733 EDRS price: MF $0.25 HC $1.36 34p.
Planning of Comprehensive Reading-Learning Clinic
Calif., Moutain View, Whisman Elem Sch Dist
A reading-learning clinic for specialized diagnostic and treatment services, inservice training, and consultant services.

ES 000 734 EDRS price: MF $0.25 HC $1.52 38p.
Learning Disability Center
N.Y., Endicott, Union-Endicott Central Sch Dist 1
Learning disability and reading center.

ES 000 772 EDRS price: MF $0.25 HC $1.00 25p.
Elementary Guidance and Counseling Laboratory
Wash., Olympia, School District No. 11
Elementary guidance, counseling, and reading laboratory.

ES 000 814 EDRS price: MF $0.25 HC $1.64 41p.
Visual-Retrieval-Reading Center
Calif., Marysville, Linda Elementary School Dist
Reading center and visual retrieval center for individualizing instruction.

ES 000 834 EDRS price: MF $0.50 HC $2.36 59p.
Educational Innovation (Project—EDINN)
Calif., Salinas, Monterey County Supt of Schools
A planning program for innovation with special emphasis on individualizing instruction.

ES 000 853 EDRS price: MF $0.50 HC $2.88 72p.
Exemplary Programs in Language Arts
Mich.,Pontiac, Oakland County Schools
A project in the development of an exemplary language arts program.

ES 000 937 EDRS price: MF $0.50 HC $3.08 77p.
Tutorial Instruction for Underachieving Readers and Writers
Utah, Logan, City Board of Education
A tutorial program for underachieving readers and writers.

ES 000 943 EDRS price: MF $0.25 HC $0.64 16p.
Special Education Services Center
Okla., Stilwell, Public Schools
A center serving handicapped children.

ES 000 944 EDRS price: MF $0.25 HC $2.24 56p.
Multidiscipline Educational Center and Services Designed for the Diffusion of Emerging Instructional Techniques and Curriculum Patterns in Individualizing Pupil Teaching and Learning
Ky., Bowling Green, City Board of Education
A demonstration center for preservice and inservice training in new instructional techniques.

ES 000 964 EDRS price: MF $0.75 HC $6.40 160p.
Regional Program for Diagnostic and Remedial Services for Children in Southwest Arkansas
Ark., Magnolia, School District 14
A diagnostic and remedial service center.

ES 000 966 EDRS price: MF $0.75 HC $6.56 164p.
Elk Grove Training and Development Center
Ill., Elk Grove Village, Comm Cons Sch Dist 59
A training and development center for teachers, administrators, and specialists.

ES 000 987 EDRS price: MF $0.25 HC $1.00 25p.
Cooperative Educational Service Agency 13
Wis., Waupun, Coop Educ Service Agency 13
An evaluative and diagnostic service center.

ES 000 989 EDRS price: MF $0.25 HC $1.40 35p.
Special and Supplemental Units of Education Brought by Mobile Classrooms to Sparsely Populated Territories
Nebr., Fremont, Dodge County Schools
A program to develop special educational services through the use of mobile classrooms.

ES 000 994 EDRS price: MF $0.25 HC $0.92 23p.
Community Reading Laboratory
S.C., Marion, County School District 1
A mobile reading laboratory for providing diagnostic, remedial, and developmental reading instruction.

ES 001 001 EDRS price: MF $0.25 HC $1.56 39p.
Mineral County, Montana Cooperative Summer Remedial Reading and Cultural Improvement Program
Mont., Superior, School District 3
Summer remedial and cultural improvement program.

ES 001 011 EDRS price: MF $0.50 HC $3.28 82p.
Diagnostic and Remedial Reading Clinic
W. Va., Charleston, Kanawha County Bd. of Educ.
A diagnostic and remedial reading center to provide services for a county area.

ES 001 013 EDRS price: MF $0.25 HC $1.92 48p.
Pilot Mobile Diagnostic Reading Laboratory and Corrective Teaching Procedures for Students with Reading Problems
Wis., Appleton, Coop Educ Service Agency 8
A pilot program in the use of a mobile diagnostic and remedial laboratory.

ES 001 019 EDRS price: MF $0.25 HC $0.84 21p.
Operation Preparation
S.C., Aiken, County Board of Education
An inservice training program on the latest methods in the language arts.

ES 001 020 EDRS price: MF $0.50 HC $2.56 64p.
Area Learning Center
Mich., Grand Rapids, Kent Interm School District
A program to develop a diagnostic learning center.

ES 001 024 EDRS price: MF $0.25 HC $0.56 14p.
Planning Community Support for School Attendance
Miss., Charleston, East Tallahatchie School Dist
A support program to improve school attendance.

ES 001 026 EDRS price: MF $0.25 HC $1.04 26p.
House Project
Mich., Painesdale, Adams Township School District
A project designed to improve the basic skills of educable mentally retarded boys.

ES 001 044 EDRS price: MF $0.25 HC $0.76 19p.
Research, Development and Innovation Center
Conn., Danielson, Town of Killingly Bd of Educ
A project designed to develop a variety of educational programs.

ES 001 049 EDRS price: MF $0.25 HC $1.40 35p.
Eclectic Program for Initial Reading Instruction
Del., Wilmington, Stanton School District
An experimental program in first grade reading.

ES 001 070 EDRS price: MF $0.25 HC $1.04 26p.
Little Egypt Development Center
Ill., Metropolis, Elementary Common District 35
A program to develop teacher-evaluation services.

James L. Laffey, Associate Director, ERIC/CRIER
200 Pine Hall, School of Education
Indiana University, Bloomington, Ind. 47401

ERIC CRIER NEWSLETTER

VOLUME 2, NUMBER 3 APRIL, 1968

THE ERIC/CRIER INSTRUCTIONAL MATERIALS INFORMATION ANALYSIS PROJECT

Recent years have seen a sharp increase in the amount of instructional material available for teaching reading. Hundreds of products cutting across all types of media are now available for purchase which have use in reading programs ranging from the preschool to college and adult levels. The teacher, administrator, and researcher find themselves increasingly flooded with revisions and updatings of older materials and a steadily rising number of completely new materials. The purpose of the ERIC/CRIER instructional materials information analysis project is to bring the user with a need for information about materials and the producer of materials closer together.

Since its inception, one of the basic objectives of ERIC/CRIER has been the improvement of methods of collecting, organizing, and disseminating information on instructional materials available for teaching reading. Committees of teachers and curriculum specialists, individual teachers, administrators, reading clinic personnel, college and university faculty, and researchers all have need for information on instructional materials. The need is usually for information of two types—indexes to available materials and evaluations on effectiveness of such materials. On the one hand exists the broadly defined group of educational users and on the other are the producers of materials. The distance between the two is often too wide. ERIC/CRIER's objective is to serve a middle role and act as a stimulator and facilitator in closing the communication gap between the two ends of the continuum. However, the resources are not unlimited, and the Clearinghouse cannot fulfill the role of supplying both information and evaluation. Evaluation is an extremely complex task, particularly where products across the publishing industry are involved. This role is left to other agencies or combinations of agencies in the educational and business communities. The dimensions of ERIC/CRIER's efforts are quite specifically oriented to providing information and providing it only in the area of reading. This is in contrast to other monolithic-type projects which attempt to provide information and evaluation on all existing instructional media across all domains of education. The major objectives of our effort include: 1) gathering a basic set of instructional materials for reading from publishers to serve as the base for information analysis activities, 2) classifying the materials so that information can be reported in usable form, 3) developing techniques for systematically disseminating information and updating the basic collection, 4) exploring the potential for automated retrieval of information, and 5) stimulating the use of the information in various information analysis activities including research and development to improve the quality of material and communication about the availability of material. These five objectives involve a combination of long- and short-term goals. The sections which follow describe the background and status of the project to date.

Acquisition of Materials

Contact has been made with publishers of instructional materials for reading and a special Task Force organized to work with the project. Although some time was required to establish communication and clearly define the goals of the project, publishers have been most cooperative in participating. Publishing houses are perhaps doubly aware of the increased demand for, and subsequent production of, instructional materials of all types throughout the broad field of education. The need for new teaching materials and resources has been particularly acute in the field of reading and is the result of the increase in research and activity in this area since the last decade. The amount of materials generated to meet this demand has virtually exploded. Thus, there is a staggering need for information about existing and newly developed materials and resources. Typical modes of disseminating information about such materials through publishers' displays at conferences and meetings, special workshops, sales representatives visiting schools, mailouts, and the like have been useful devices but need further supplementation. Although scattered attempts have been made to organize information on materials for dissemination, no broadly based project has yet been developed to systematically meet the need for information on a continuous basis. Publishers have been asked to supply three types of material for the project.

1. *Instructional Materials.* Included are basal readers, materials designed to teach specific reading skills not part of a basal series, workbooks, programmed texts, kits, and paperbacks designed for instruction in developmental and remedial reading. Trade books constitute a special area and will not be processed. However, special collections or series designed as supplementary materials for instructional purposes are included. We are particularly interested in high interest, low difficulty materials designed to aid poor readers and supplementary materials of like nature other than trade books. Instructional materials of use in attaining reading skills at all stages of human development—preschool, elementary, secondary, college, and adult—have been requested.

2. *Materials for Teachers.* A major goal of the Task Force is to systematically identify the materials and texts on reading available for the preservice, inservice, and graduate training of teachers and reading specialists. Textbooks and other materials for this purpose over and above those designed for use with the materials listed above have been requested.
3. *Tests and Evaluative Instruments.* Special tests and evaluative instruments for use with instructional materials and standardized tests for group and individual diagnosis of reading have been requested.

In addition to materials in these three categories, publishers have been requested to supply copies of descriptive and promotional materials related to their products for use by the Clearinghouse staff in describing their products. A good percentage of the available material in the three categories has been acquired, and systematic classification has begun. An informal newsletter to communicate with publishers has been established and is now in its fourth issue.

Classifying the Materials

The immediate goal of the project is to provide and update descriptive catalogs for the three types of materials. Classification systems for all three types are in varying stages of development. This has proven to be one of the most challenging aspects of the project. The vocabulary used in publicizing materials is not uniform across publishers, and such terminology also varies depending on the orientation of the user. This project could provide beginnings for more standard usage of descriptors in describing materials. ERIC/CRIER deliberately attempts to take a middle road and provide a general classification scheme that will effectively communicate with the broadest user group. In classifying instructional materials, information will be available on the type of material, difficulty level, interest level, skills developed, general philosophy of instruction, and setting of the material. A scheme using appropriate elements of the above is being developed for tests and measuring instruments. In addition to providing descriptive information for teaching materials, it is hoped that a system for cross-referencing the tables of contents of textbooks can be developed. Economics is a major factor in developing and applying any classification scheme, particularly where several thousand units may comprise the data base. The first catalogs will provide a level of classification commensurate with available resources. It is hoped that greater depth of descriptive and content classification can occur later.

Dissemination, Updating, and Automation

On completion, the three catalogs will be made available through ERIC resources and announced in *Research in Education.* A small quantity of multilithed copies will be available through ERIC/CRIER. However, through use of the ERIC resources, the catalogs can be made available to the widest possible user group. ERIC/CRIER cannot possibly print enough catalogs to supply all users. However, once the catalogs are available in microfiche and hard copy through ERIC, the 22,000 local education agencies and other individuals and interested groups will have ready access to them. The publishers cooperating in the Task Force have agreed to update their collections as newer materials are produced. These will be added to the basic set of materials and supplements of the catalogs produced. There is great potential for eventually developing an in-depth classification scheme for all three types of materials and pioneering an automated system which would provide interrogation of the file on questions related to instructional materials information needs. Continued exploration in this area is planned; and, if resources become available, it can become reality.

Stimulating Information Analysis

The resource of materials that will be available through the project can be utilized in various information analysis projects. Much work remains to be done in establishing better communication between the user and the producer of materials. The three catalogs are just a first step in organizing and disseminating information. Research and development is also needed to improve the quality and utility of instructional materials as well as increasing the quantity. ERIC/CRIER resources could serve as a base for continuing efforts by various groups and individuals interested in upgrading and developing materials for reading instruction. Work is beginning on development of various strategies to stimulate facets of information analysis which involve the producers of materials, professionals in reading, and various other users. ■

A FOUNDATION REPORT ON INFORMATION PROBLEMS

The problem of efficient handling of information is certainly not peculiar to the field of education. It has national and international dimensions that go far beyond the efforts of ERIC and the clearinghouses that make up the system. Tremendous effort has been taking place in scientific and technical fields in developing more effective techniques for information transfer. Only recently has such effort begun in the social sciences. The backlog of theory and practice from efforts in the scientific and technical fields provided a ready reservoir from which to draw in developing the ERIC system. The government's involvement in information problems is well known and is succinctly set forth in *Science, Government, and Information,* a special report of the President's Science Advisory Committee, referred to previously in various contexts in this *Newsletter.* The monograph is a key reading requirement for anyone involved in establishing information facilities, and the concepts reported undergird much of the ERIC development.

It is difficult to indicate the value of the contents of the report. Two chapters which deal with the nature of the information problem, and attributes and problems of the information transfer chain and of information systems, are particularly helpful. The suggestion that the author must take more responsibility for information is an intriguing one. The report lists many ways in which authors can help. Some of these might be implemented by professional societies in the form of recommendations to members who produce materials for publication. *Science, Government,* and *Information* provides stimulating reading and can be ordered from: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (1963 0-714-851, $.25).

NEED INFORMATION ABOUT ERIC AND ERIC/CRIER?

A number of products are now available in the ERIC system as a result of increased activities in Central ERIC and the 18 clearinghouses. A comprehensive portfolio of ERIC and ERIC/CRIER products and services has been prepared by the Clearinghouse. Write to ERIC/CRIER, 200 Pine Hall, Indiana University, Bloomington, Indiana 47401, to receive a copy. Ask for "Portfolio of ERIC and ERIC/CRIER Products and Services."

SPINOFF FROM THE DIRECTOR

Expansion of Research Literature on Reading

As has often been pointed out, the production of scholarly literature is increasing rapidly. In fact we often hear it said that an explosion of information is taking place. In 1966 one of the fundamental issues discussed in the literature on information science was whether or not a national problem, which could be called an information explosion, indeed existed. (1) While many authorities have accepted the term explosion, Licklider (2) preferred to describe what has been happening in the scientific and technical communities as a flood rather than an explosion. Licklider maintained that the amount of information has been progressively increasing for a long time and is now "overflowing" in some areas. While the rise in the amount of information has been gradual, the overflow has been sudden and dramatic. And, as Licklider has so aptly pointed out, if an explosion were to occur, there would be little hope of coping with it.

In a recently completed project, Summers (3) tabulated the increase in reading research, using as a base the 4,159 journal articles reported in the annual Gray Summaries for the period 1884 to 1965-66. The statistics indicate that the information base in reading research has gradually increased in size up to the early 1960's. In 1935-36 there were approximately twice as many journals reporting twice as many articles as were recorded in the early years of the summary in the 1920's. This increase holds and gradually expands until the early 1960's when a sharp rise occurs. The 1965-66 summary reported four times as many journals carrying approximately seven times as many articles as were reported in the early years of the summaries. Thus, journal production rose 400 percent and reported articles increased 700 percent across the life of the summaries. This same increase has been noted in other areas. Holt and Schrank (4) analyzed the growth of the professional literature in economics, psychology, electrical engineering, and physics. They concluded, "There seems to be evidence of a spurt in literature growth in most of the fields since 1960." They also ask, "Can this be interpreted as reflecting a change in long-term trend or is it a transitory fluctuation? It may be important to find out."

The gradual increase in reports becomes, in and by itself, an information problem. However, since the early 1960's the water is beginning to overflow the banks, and Licklider's flood stage may be upon us in the production of research articles on reading. Regardless of whether one calls the ever-expanding volume of published literature an exponential increase or refers to it as a flood or an explosion, the issue is not one of terminology, rather it is one of systematic control, organization, and dissemination. Methods have to be developed to cope with the current and future increase. If the marked increase reported during recent years continues proportionately for the next decade, greater expenditures of money and effort will have to be made to keep our heads above water. Increased amounts of money and increased exhortations to expand and improve research appear forthcoming. The academic community will undoubtedly continue its interest in the problems of language development and reading. It would be entirely realistic to expect the number of reports appearing during the next ten years to double unless economic and military problems have a marked effect. The statistics reported here relate to increase in published reports. A parallel increase in non-published reports and other fugitive documents is also occurring which makes the information problem even more acute.

[illegible] are qualitative as well as quantitative aspects of the increase in reading research literature. Techniques can be developed to cope with the sheer numerical increase. However, the quantitative aspects of the increase may not be as disruptive overall as the qualitative aspects. It is often suggested that more research has been produced on reading than any other area of the curriculum. The corollary suggestion is also heard that although much research is available it is often narrowly conceived, pays little attention to previous results, and is fragmentary in nature. The ERIC effort, by locating and organizing research and aiding in its integration and analysis, has potential for making a difference in this regard.

E. G. S.

(1) Hammer, D. P. "National Information Issues and Trends." In C. A. Cuadra (Ed.) *Annual Review of Information Science and Technology*, Vol. 2. New York: Wiley, 1967. 385-417.

(2) Licklider, J. C. R. "A Crux in Scientific and Technical Communication." *American Psychologist*, 1966, 21, 1044-1051.

(3) Summers, E. G. *Storing and Searching Reading Research by Computer.* Final Report, USOE Project OE-5-10-224, Indiana University, Bloomington, December, 1967.

(4) Holt, Charles C. & Schrank, William E. "Growth of the Professional Literature in Economics and Other Fields, and Some Implications," *American Documentation*, 1968, *19*, No. 1, p. 23.

ERIC/CRIER TO PARTICIPATE IN IRA BOSTON CONVENTION

The 32 page Preview Program for the 13th annual convention of the IRA (April 24-29, 1968) indicates that this event should be one of the largest and most stimulating ever. ERIC/CRIER staff are scheduled for several presentations.

THURSDAY, April 25, 10:30-11:30 a.m.
10A ERIC/CRIER and Information Utilization in Reading
Acquiring and Disseminating Information
Chairman:
William Perot Morris, Indiana University
Speakers:
Larry A. Harris, Indiana University
"The Acquisition Program"
James L. Laffey, Indiana University
"Dissemination Activities"

THURSDAY, April 25, 1:30-2:30 p.m.
10B ERIC/CRIER and Information Utilization in Reading
Organizing and Retrieving Information
Chairman:
Charles T. Mangrum II, Indiana University
Speakers:
Ronald Johnson, Minnetonka, Minnesota, Public Schools
"A General Classification Scheme for Reading Resources"
Charles H. Davis, Indiana University
"Retrieval by Computer"

THURSDAY, April 25, 4:30-5:30 p.m.
10C ERIC/CRIER and Information Utilization in Reading
ERIC/CRIER Developments
Chairman:
Brenda Kolker, Indiana University
Speakers:
Carl B. Smith, Indiana University
"Information on Instructional Materials"
Edward G. Summers, Indiana University
"Some Future Developments"

The six presentations listed above are designed to provide a comprehensive overview of ERIC and ERIC/CRIER organization and activities and indicate future directions and plans.

INFORMATION BITS . . .

We remind you, as our flamingo pink insert in your last ERIC/CRIER mailing informed you, that the address for the ERIC Document Reproduction Service is now:

EDRS
The National Cash Register Company
4936 Fairmont Avenue
Bethesda, Maryland 20014

Documents announced in *Research in Education* can be ordered by ED accession number in microfiche or hard copy at indicated prices EXCEPT that the cost of individual microfiche announced prior to January 1, 1968 must be adjusted to take into account the increase in microfiche cost to $0.25 per fiche. Thus—if the previous cost was $0.09, the present cost is $0.25; if the previous cost was $0.18, the present cost is $0.50, and so on.

This pricing information may also be useful to you: (1) Add a special handling charge of $0.50 to orders totaling less than $3. (2) Add applicable state sales tax or submit evidence of tax exemption certificate. (3) Add a 25% service charge on all orders from outside the United States, its territories, and possessions. (4) Payment must accompany orders totaling less than $5. Do not send stamps. (5) Prepaid EDRS coupons in the amount of $20 are available upon request from EDRS.

—eric/crier—

Things in the offing from the computer—Charles Davis, Director of Systems, is experimenting with some special programs for retrieving information from the file of data generated from the ERIC/CRIER multidimensional classification matrix. Mr. Davis is also writing a program which will merge the classification data with the ERIC/CRIER Master File on magnetic tape. Once this operation is completed, custom bibliographies will be prepared using the computer to search through the material on the new tape.

—eric/crier—

The 15,000 plus entries which will appear in the *Catalog of Instructional Materials in Reading*, described in the lead article of this newsletter, are being classified by a team of graduate students in reading. Bill Morris directs the team which consists of Sister Iona Taylor, Shari Schap, and Bruce Payette. The library of instructional materials provided by the 300 cooperating publishers is housed in four rooms of Pine Hall.

Another graduate student in the field of reading, Al Conaway, is now organizing and classifying tests and evaluation instruments for reading. He will be assisted by the instructional materials team when its classification job is completed. Texts for teachers of reading are also being classified. The whole project is under the direction of Dr. Larry Harris, Assistant Director of ERIC/CRIER.

—eric/crier—

Just off the press are two promised ERIC/CRIER publications: *Published Research Literature in Reading, 1900-1949* and *Published Research Literature in Reading, 1964-1966.* These two computer printoff volumes with *Published Research Literature in Reading, 1950-1963,* announced in the February issue of the *ERIC/CRIER Newsletter,* complete the publication of bibliographies of the basic research in reading from 1900 to June, 1967, as compiled in the annual summaries of reading research.

All three volumes include 5,652 citations and one-line annotations. The three volumes are now available from EDRS: *Published Research Literature in Reading, 1900-1949,* ED 013 970, microfiche, $2.00 and hard copy, $19.92; *Published Research Literature in Reading, 1950-1963,* ED 012 834, microfiche, $1.50 and hard copy, $15.92; and *Published Research Literature in Reading, 1964-1966,* ED 013 969, microfiche, $0.75 and hard copy, $7.28.

—eric/crier—

ERIC/CRIER ADVISORY BOARD

A. Steri Artley
University of Missouri

Wilmer Baatz
Indiana University

Thomas C. Barrett
University of Wisconsin

John Bormuth
University of Chicago

Morton Botel
University of Pennsylvania

N. Dale Bryant
Columbia University

Theodore Clymer
Santa Barbara, California

Myron Coulter
Western Michigan University

Brother Leonard Courtney
Christian Brothers Provincialate

Robert Dykstra
University of Minnesota

Margaret Early
Syracuse University

William Eller
State Univ. of N.Y. at Buffalo

Douglas Ellson
Indiana University

Roger Farr
Indiana University

Larry Harris
Indiana University

Harold L. Herber
Syracuse University

Peter Hiatt
Indiana University

Thomas D. Horn
University of Texas

James F. Kerfoot
Wisconsin State University

Albert Kingston
University of Georgia

Roy Kress
Temple University

James L. Laffey
Indiana University

Ronald Mitchell
Internat'l Reading Assoc.

Alton L. Raygor
University of Minnesota

H. Alan Robinson
Hofstra University

Ramon Ross
San Diego State College

Carl Smith
Indiana University

Ralph Staiger
Internat'l Reading Assoc.

Leo. C. Fay
Indiana University

Edward G. Summers,
Indiana University

ERIC/CRIER NEWSLETTER

The ERIC/Clearinghouse on Retrieval of Information and Evaluation on Reading is a national clearinghouse to organize and disseminate significant research, information, and materials on reading to teachers, administrators, researchers, and the public. The Clearinghouse is a joint project of the International Reading Association and Indiana University in cooperation with the Educational Resources Information Center of USOE.

The *ERIC/CRIER Newsletter* is a publication of the Clearinghouse. The *Newsletter* is designed to collect information; inform users of current activities, services, projects, recent accessions; and act as a communications medium for the Clearinghouse. The *Newsletter* is issued three times a year: in November, February, and April.

THE ERIC/CRIER *NEWSLETTER* is:
Written by .....Dr. Leo C. Fay
Dr. Edward G. Summers
Edited by .....Mrs. Catherine F. Siffin

200 Pine Hall, College of Education,
Indiana University, Bloomington, Indiana 47401

USOE SPONSORED RESEARCH ON READING

Another important publication has been issued by ERIC—a two-volume historical report of research sponsored by the Bureau of Research, U.S. Office of Education, during the period 1956-65. The official titles: *Office of Education Research Reports, 1956-65, Indexes* and *Office of Education Research Reports, 1956-65, Resumes.* The purpose of the compilation, which predates research reported in *Research in Education,* is to help teachers, administrators, research specialists, and others in the educational community make better use of available research results. The historical report provides information on 1,214 projects sponsored by the Bureau of Research, USOE, primarily under the Cooperative Research Program.

Individual copies of the two volumes *(Indexes,* OE-12028, $2.00 and *Resumes,* OE-12029, $1.75) may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

As the titles indicate, one volume consists entirely of resumes of the research reports. The format is identical to that of *Research in Education.* An individual entry includes accession number, title, author, institution, report and contract numbers, microfiche and hard copy prices, index terms, and an informative abstract of about 200 words. Resumes are arranged numerically by accession number making the companion index volume necessary to help the reader locate specific research documents. These indexes are included: author, institution, subject, and report number.

The total collection of documents in *Office of Education Research Reports, 1956-1965, Resumes* (1,214 documents) is available in microfiche from the ERIC Document Reproduction Service of NCR for $280.00.

Presented here is a listing of research reports relating to reading from the new ERIC publication. Documents may be ordered by accession number from EDRS, the National Cash Register Co., 4936 Fairmont Avenue, Bethesda, Maryland 20014. Microfiche and hard copy prices are indicated with each entry.

ED 002 747 EDRS price: MF $0.50 HC $ 2.84 71p.
Quantitative and Qualitative Analyses of Exogenous and Endogenous Children in Some Reading Processes.
By: Capobianco, Rudolph J. Miller, Donald Y.
A comparative study between selected groups of normal and retarded readers.

ED 002 789 EDRS price: MF $0.25 HC $ 1.48 37p.
Language Achievements of Mentally Retarded Children.
By: Durrell, Donald D. Sullivan, Helen B.
A study of language and reading among mentally retarded children.

ED 002 793 EDRS price: MF $0.50 HC $ 3.88 97p.
The Drop-Out Problem in Iowa High Schools.
By: Van Dyke, L. A. Hoyt, K. B.
A study of high school drop-outs.

ED 002 794 EDRS price: MF $0.75 HC $ 7.36 184p.
How Can Reading Be Taught to Educable Adolescents Who Have Not Learned to Read.
By: Boyle, Ruth C.
A reading program for mentally retarded adolescents.

ED 002 837 EDRS price: MF $0.75 HC $ 5.96 149p.
Language Ability in the Middle Grades of the Elementary School.
By: Loban, Walter
An investigation of children's language development.

ED 002 859 EDRS price: MF $0.50 HC $ 2.60 65p.
Relationship of the Self-Concept to Beginning Achievement in Reading.
By: Wattenberg, William W. Clifford, Clare
An exploratory study of the relationship between self-concept and reading achievement.

ED 002 883 EDRS price: MF $0.25 HC $ 1.08 27p.
Conservational English for Nonenglish-Speaking Children.
By: Cooper, James G.
A special language arts program for primary grade children on Guam.

ED 002 884 EDRS price: MF $1.00 HC $ 8.76 219p.
Effectiveness of Centralized Library Service in Elementary Schools (Phase I).
By: Gaver, Mary V.
A study of the relationship between available library services and reading achievement.

ED 002 899 EDRS price: MF $0.75 HC $ 5.52 138p.
The Perception of Music Symbols in Music Reading by Normal Children and by Children Gifted Musically.
By: Petzold, Robert G.
An investigation of gifted and normal children's ability to read music symbols.

ED 002 928 EDRS price: MF $1.50 HC $15.00 375p.
Studies of the Effects of Systematic Variations of Certain Conditions Related to Learning. II. Conditions of Practice.
By: Blake, Kathryn A. and others
A study of the effects of task variation of students of different ability levels.

ED 002 964 EDRS price: MF $1.50 HC $14.88 372p.
The Substrata-Factor Theory—Substrata-Factor Differences Underlying Reading Ability in Known-Groups.
By: Holmes, Jack A. Singer,Harry
An investigation of the substrata-factor theory.

ED 002 967 EDRS price: MF $1.50 HC $15.72 393p.
A Basic Research Program on Reading.
By: Levin, Harry and others
A theoretical analysis of the reading process as a basis for a reading research program.

ED 002 970 EDRS price: MF $0.75 HC $ 5.88 147p.
The Language of Elementary School Children—Its Relationship to the Language of Reading Textbooks and the Quality of Reading of Selected Children.
By: Strickland, Ruth G.
A study of the language of elementary school children and its relationship to the language of reading textbooks.

ED 002 972 EDRS price: MF $0.25 HC $ 1.84 46p.
Problem-Solving Proficiency Among Elementary School Teachers, III. Teachers of Reading Grades 2-5.
By: Wade, Eugene W.
A test of teaching reading skills for teachers was constructed and validated.

ED 003 003 EDRS price: MF $0.25 HC $ 1.84 46p.
Comprehension of Rapid Speech by the Blind, Part I.
By: Bixler, Ray H. and others
A comparative study of the reading and listening comprehension of blind students.

ED 003 021 EDRS price: MF $0.75 HC $ 6.48 162p.
A Speech and Reading Enrichment Program.
By: Weiss, Rita S.
A special program in speech and reading for kindergarten children.

ED 003 023 EDRS price: MF $2.00 HC $19.56 489p.
The Use of Standardized Ability Tests in American Secondary Schools and Their Impact on Students, Teachers, and Administrators.
By: Brim, Orville G. and others
A survey of teachers', students', and administrators' attitudes toward standardized tests.

ED 003 025 EDRS price: MF $0.75 HC $ 6.76 169p.
Contextual Constraints in the Language of the Child.
By: Carterette, Edward C. Jones, Margaret H.
A study of the effect of language redundancy on the verbal learning of children.

ED 003 030 EDRS price: MF $0.50 HC $ 3.20 80p.
The Development of Textual Behavior and Its Function in Communication.
By: Staats, Arthur W. and others
A description of the use of operant conditioning in reading instruction.

ED 003 042 EDRS price: MF $0.50 HC $ 3.20 80p.
Visual and Auditory Efficiency and Its Relationship to Reading in Children.
By: Katz, Phyllis A. Deutsch, Martin
An exploratory study of the relationship between auditory and visual functioning and reading achievement.

ED 003 062 EDRS price: MF $0.25 HC $ 1.68 42p.
Administering a Listening Comprehension Test Through Use of Teacher-Readers, Sound Film, and Tape Recordings.
By: Stodola, Quentin and others
A study of the reading abilities of teachers during the administration of a listening test.

ED 003 080 EDRS price: MF $0.50 HC $ 2.48 62p.
Influence of Special Programs on the Development of Mental Age and Reading.
By: Robbins, Melvyn P.
A study of the Delacato's neurological organization program on reading achievement.

ED 003 081 EDRS price: MF $0.25 HC $ 1.96 49p.
Development of Reading and English Language Materials for Grades 7-9 in Depressed Urban Areas.
By: Smiley, Marjorie B.
A project to develop English materials for disadvantaged students.

ED 003 150 EDRS price: MF $0.50 HC $ 4.72 118p.
A Demonstration of the Use of Self-Instructional and Other Teaching Techniques for Remedial Instruction of Low-Achieving Adolescents in Reading and Mathematics, Final Report.
By: Homme, Lloyd E.
A demonstration of the use of self-instructional techniques with low-achieving adolescents.

ED 003 185 EDRS price: MF $0.50 HC $ 3.80 95p.
Assessment of Some Newly Designed Educational Media for the Self-Teaching of Young Children in School and at Home.
By: Beck, Lester F. and others
A study of the effect of self-help materials on reading achievement.

ED 003 312 EDRS price: MF $0.25 HC $ 2.04 51p.
Silent Speech During Silent Reading.
By: McGuigan, Frank J.
A study of silent speech and its relationship to selected reading behaviors.

ED 003 313 EDRS price: MF $1.25 HC $13.28 332p.
Comparisons of the Reading and Spelling Achievement and Quality of Handwriting of Groups of English, Scottish, and American Children.
By: Anderson, Irving H. and others
A study of reading and spelling achievement among English, Scottish, and American children.

ED 003 321 EDRS price: MF $1.00 HC $ 9.24 231p.
Phoneme-Grapheme Correspondences as Cues to Spelling Improvement.
By: Hanna, Paul R. and others
A study of the relationship between phonemic and graphemic structure of selected words.

ED 003 325 EDRS price: MF $0.75 HC $ 5.76 144p.
Relationships Between Selected Language Variables and Comprehension Ability and Difficulty.
By: Bormuth, John R.
A study of the relationships between selected language variables and comprehension ability.

ED 003 349 EDRS price: MF $0.50 HC $ 3.72 93p.
The Use of Programmed Instruction in the Development of Recognition Skills.
By: Williams, Joanna P.
An investigation in the use of programmed instruction as a technique in word recognition.

ED 003 355 EDRS price: MF $1.50 HC $14.24 356p.
A Study of a Longitudinal First Grade Reading Readiness Program.
By: Spache, George D. and others
A longitudinal study of reading readiness.

ED 003 357 EDRS price: MF $0.75 HC $ 7.92 198p.
Rules to Aid in the Teaching of Reading.
By: Weir, Ruth H. Venezky, Richard L.
A study of the application of a linguistic model to the teaching of reading and spelling.

ED 003 358 EDRS price: MF $0.75 HC $ 7.16 179p.
Reading Achievements of First Grade Boys Versus First Grade Girls Using Two Approaches—A Linguistic Approach and a Basal Reader Approach with Boys and Girls Grouped Separately.
By: Wyatt, Nita M.
A study of two approaches to beginning reading instruction.

ED 003 359 EDRS price: MF $0.50 HC $ 3.76 94p.
Effects of an Intensive Inservice Program on Teachers' Classroom Behavior and Pupil Reading Achievement.
By: Heilman, Arthur W.
A study of the effects of inservice training on children's reading achievement.

ED 003 360 EDRS price: MF $0.25 HC $ 2.16 54p.
An Attempt to Secure Additional Evidence Concerning Factors Affecting Learning to Read.
By: Hayes, Robert B. Nemeth, Joseph S.
A comparative study of four methods of beginning reading instruction.

ED 003 361 EDRS price: MF $0.50 HC $ 3.32 83p.
First Grade Reading Using Modified Co-Basal Versus the Initial Teaching Alphabet.
By: Mazurkiewicz, Albert J.
A comparative study of different methods of teaching beginning reading.

ED 003 362 EDRS price: MF $0.50 HC $ 5.08 127p.
Effects of an Intensive Inservice Program on Teachers' Classroom Behavior and Pupil Reading Achievement.
By: Loree, M. Ray
A study of the effects of inservice training on the reading achievement of children.

ED 003 375 EDRS price: MF $0.25 HC $ 2.04 51p.
The Contribution of Structural Linguistics to the Teaching of Reading, Writing, and Grammar in the Elementary School.
By: Strickland, Ruth G.
A conference to determine how linguistics could be applied to work in the elementary schools.

ED 003 387 EDRS price: MF $0.50 HC $ 3.88 97p.
First Grade Reading Instruction Using a Diacritical Marking System, the Initial Teaching Alphabet and a Basal Reading System.
By: Fry, Edward Bernard
A comparative study of two methods of beginning reading instruction.

ED 003 394 EDRS price: MF $0.50 HC $ 3.96 99p.
Development of Experimental Audiovisual Devices and Materials for Beginning Readers.
By: Gibson, Christine M. Richards, I. A.
A study of the audio-visual aids and their effect on beginning reading.

ED 003 409 EDRS price: MF $1.25 HC $11.36 284p.
Planning for a Reading Research Program.
By: Levin, Harry
A conference to determine a research model for reading.

ED 003 422 EDRS price: MF $0.25 HC $ 0.52 13p.
Conference on Coordination of Accepted Proposals for the Cooperative Research Program in First Grade Reading Instruction. Final Report.
By: Bond, Guy L. Dykstra, Robert
A conference on the coordination of first-grade reading studies.

ED 003 445 EDRS price: MF $0.50 HC $ 4.00 100p.
Formulation of Grapheme-Phoneme Correspondence Rules to Aid in the Teaching of Reading.
By: Weir, Ruth H.
An investigation to establish linguistic rules to aid in the teaching of reading.

ED 003 469 EDRS price: MF $0.50 HC $ 4.68 117p.
Comparison of the Initial Teaching Alphabet with the Traditional Alphabet in First-Grade Reading.
By: Chasnoff, Robert E.
A comparative study of the initial teaching alphabet and the traditional alphabet.

ED 003 470 EDRS price: MF $0.25 HC $ 2.20 55p.
A Study of the Relationship of Certain Oculomotor Skills to Reading Readiness.
By: Efron, Marvin
A study of the relationship of eye movements to reading readiness.

ED 003 477 EDRS price: MF $0.50 HC $ 3.16 79p.
A Comparative Study of Beginning Reading Achievement Under Three Classroom Organizational Patterns—Modified Individualized, Three-to-Five Groups, and Whole-Class Language-Experience.
By: Marita, Sister M.
A study of the effect of classroom organizational patterns on beginning reading achievement.

ED 003 478 EDRS price: MF $0.50 HC $ 4.56 114p.
Reading Achievements in Relation to Growth in Perception of Word Elements in Three Types of Beginning Reading Instruction.
By: Murphy, Helen A.
A study of the effect of word perception on beginning reading achievement.

ED 003 484 EDRS price: MF $0.75 HC $ 5.96 149p.
Effectiveness of a Language Arts and Basic Reader Approach to First Grade Reading Instruction.
By: Stauffer, Russell G. Hammond, Dorsey
A comparative study of beginning reading instruction.

ED 003 485 EDRS price: MF $0.75 HC $ 5.52 138p.
Effectiveness of Three Different Basal Reading Systems on First Grade Reading Achievement.
By: Tanyzer, Harold J. Alpert, Harvey
A comparative study of three basal reading systems.

ED 003 486 EDRS price: MF $0.50 HC $ 2.80 70p.
Individualized Reading Versus a Basal Reader Program at First Grade Level, in Rural Communities.
By: Spencer, Doris U. Moquin, L. Doris
A study of the effectiveness of individualized and basal reading programs.

ED 003 487 EDRS price: MF $1.25 HC $11.80 295p.
Substrata-Factor Reorganization Accompanying Development in Speed and Power of Reading at the Elementary School Level.
By: Singer, Harry
A test of the substrata-factor theory with elementary pupils.

ED 003 488 EDRS price: MF $1.25 HC $11.52 288p.
The Effect of Different Approaches of Initial Instruction on the Reading Achievement of a Selected Group of First Grade Children.
By: Reid, Hale C. Beltramo, Louise
A comparative study of beginning reading instruction.

ED 003 543 EDRS price: MF $0.50 HC $ 4.88 122p.
An Experimental Project Appraising the Effectiveness of a Program Series on Reading Instruction Using Open-Circuit Television.
By: Hunt, Lyman C.
A study of the effect of a series of television programs on teachers of reading.

ED 003 677 EDRS price: MF $0.50 HC $ 4.28 107p.
An Exploratory Study of the Effects of Bibliotherapy on the Behavioral Pattern of Adolescents.
By: Sandefur, J. T. Bigge, Jeanette
A study of the effects of bibliotherapy.

ED 003 692 EDRS price: MF $0.50 HC $ 3.32 83p.
A Study of the Effects of Self-Directive Dramatization on the Progress in Reading Achievement and Self-Concept of Culturally Disadvantaged Elementary School Children.
By: Carlton, Lessie Moore, Robert H.
A study of the effects of self-dramatization on reading achievement and self-concept.

ED 003 695 EDRS price: MF $0.25 HC $ 1.32 33p.
Comparison of Two Procedures for Teaching Reading to Primary Children with Visual Perception Difficulties.
By: Lapray, Margaret Ross, Ramon
A program of special training was given to children with visual perception difficulties.

ED 003 702 EDRS price: MF $0.25 HC $ 1.64 41p.
Pilot Study on Reading Problems Due to Visual Disability.
By: Yvonne, Sister M.
A study of the use of oculormotor training to improve reading achievement.

ED 003 705 EDRS price: MF $0.50 HC $ 2.52 63p.
Effects of Self-Directed Learning on Gifted Elementary School Children.
By: Gold, Marvin J.
A study of the effects of self-directed study on elementary school children.

ED 003 708 EDRS price: MF $0.75 HC $ 6.32 158p.
Comparison of Two Methods of Teaching Reading in Grades 5 and 6.
By: Thatcher, David A. Parker, Cecil J.
A comparative study of individualized and basal reading methods.

ED 003 820 EDRS price: MF $0.75 HC $ 7.76 194p.
The Effect of Four Programs of Reading Instruction with Varying Emphasis on the Regularity of Grapheme-Phoneme Correspondences and the Relation of Language Structure to Meaning on Achievement in First Grade Reading.
By: Ruddell, Robert B.
Four reading programs were studied to determine their effect on word recognition and comprehension skills.

ED 003 821 EDRS price: MF $0.50 HC $ 3.52 88p.
Improving Reading Skills by Teaching Rules of Grammar.
By: Blumenfeld, J. P. and others
A study of the effect of teaching rules of grammar on reading skills.

ED 003 832 EDRS price: MF $0.25 HC $ 1.04 26p.
A Winter Study Group on Reading.
By: Ferguson, Charles A.
A study group of scholars met to determine new directions for reading research.

ED 003 836 EDRS price: MF $0.25 HC $ 0.88 22p.
Conference on Coordination of the Cooperative Studies of First Grade Reading.
By: Robinson, Helen M.
A conference on the coordination of first grade reading studies.

ED 003 838 EDRS price: MF $0.25 HC $ 0.52 13p.
Experimental Use of the "Impress Method of Reading Habilitation."
By: Gardner, Charles
An investigation of the impress method of remedial reading.

ED 003 846 EDRS price: MF $0.25 HC $ 1.96 49p.
Central Auditory Abilities of Normal and Lower Group Readers.
By: Flowers, Arthur
An investigation of central auditory abilities of selected students.

ED 003 854 EDRS price: MF $0.25 HC $ 0.88 22p.
Initial Teaching Alphabet (I. T. A.) for Instruction of Reading Disability Cases.
By: Lewis, Edward R.
A study of the use of the I. T. A. with reading disability cases.

ED 003 857 EDRS price: MF $2.75 HC $25.44 636p.
Tests of General Ability and Reading, Inter-American Series.
By: Manuel, Herschel T.
A parallel series of reading and other tests were developed in Spanish and English.

James L. Laffey, Associate Director, ERIC/CRIER
200 Pine Hall, School of Education
Indiana University, Bloomington, Ind. 47401

REMEMBER THESE COMPLETE INSTRUCTIONS FOR ORDERING MICROFICHE (MF) and HARD COPY (HC) REPRODUCTIONS of documents listed in this *Information Brief:*

1. Order from EDRS
   The National Cash Register Company
   4936 Fairmont Avenue
   Bethesda, Maryland 20014.
2. Order by ED accession number at MF (microfiche) or HC (hard copy) price indicated with the document.
3. Add a special handling charge of 50¢ to orders totaling less than $3.
4. Add applicable state sales taxes or submit evidence of tax exemption certificate.
5. Add a 25% service charge on all orders from outside the United States, its territories, and possessions.
6. Payment must accompany orders totaling less than $5. Do not send stamps. $20 prepaid EDRS coupons are available upon request from EDRS.

RESEARCH IN EDUCATION

Final reports on completed projects funded through USOE are announced in *Research in Education* as they become available. *RIE* is now available in many libraries. Individual subscriptions can also be ordered. The yearly subscription charge is $11.00 per year domestic and $13.00 foreign for twelve issues. Subscriptions can be ordered from: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Many individuals and institutions are placing standing orders for complete microfiche sets of all documents as they are announced in *RIE*. Prices for complete sets will vary month by month depending on the number of documents reported. The standing order price is estimated to be about $60.00 per month. National Cash Register, ERIC Document Reproduction Service, 4936 Fairmont Avenue, Bethesda, Maryland 20014, should be contacted relative to standing orders.

The first *Research in Education* summary, including the complete set of 2,249 documents announced by the ERIC system, can be ordered as a set from National Cash Register, ERIC Document Reproduction Service. *Research in Education, 1966-67* combines materials from the first 14 issues of *RIE* and includes abstracts, indexes, prices, and order numbers for individual documents. The complete microfiche set can be ordered for $370.00.

ERIC/CRIER ADVISORY BOARD
1968-69

A. Sterl Artley
University of Missouri

Wilmer Baatz
Indiana University

Thomas C. Barrett
University of Wisconsin

John Bormuth
University of Chicago

Morton Botel
University of Pennsylvania

N. Dale Bryant
Columbia University

Theodore Clymer
Santa Barbara, California

Myron Coulter
Western Michigan University

Brother Leonard Courtney
Christian Brothers Provincialate

Robert Dykstra
University of Minnesota

Margaret Early
Syracuse University

William Eller (Co-Chairman)
State Univ. of N. Y. at Buffalo

Douglas Elison
Indiana University

Roger Farr
Indiana University

Leo C. Fay
Indiana University

Larry Harris
Indiana University

Harold L. Herber
Syracuse University

Peter Hiatt
Indiana University

Thomas D. Horn
University of Texas

James F. Kerfoot
Wisconsin State University

Albert Kingston
University of Georgia

Roy Kress
Temple University

James L. Laffey
Indiana University

Ronald Mitchell
International Reading Association

Alton L. Raygor
University of Minnesota

H. Alan Robinson
Hofstra University

Ramon Ross
San Diego State College

Carl Smith
Indiana University

George Spache
Jacksonville, Florida

Ralph Staiger
International Reading Association

Edward G. Summers (Co-Chairman)
Indiana University

THE EIGHTEEN CLEARINGHOUSES IN THE ERIC SYSTEM

ADULT EDUCATION
Syracuse University
107 Roney Lane
Syracuse, N.Y. 13210

COUNSELING AND PERSONNEL SERVICES
Services Information Center
611 Church St.
Ann Arbor, Michigan 48104

DISADVANTAGED
Yeshiva University
55 Fifth Ave.
New York, N.Y. 10003

EARLY CHILDHOOD EDUCATION
University of Illinois
805 West Pennsylvania Ave.
Urbana, Ill. 61801

EDUCATIONAL ADMINISTRATION
University of Oregon
Eugene, Oregon 97403

EDUCATIONAL FACILITIES
University of Wisconsin
606 State St.
Madison, Wis. 53703

EDUCATIONAL MEDIA & TECHNOLOGY
Institute for Communication Research
Stanford University
Palo Alto, Calif. 94305

EXCEPTIONAL CHILDREN
National Education Association
1201 16th St., N.W.
Washington, D.C. 20036

JUNIOR COLLEGES
University of California at Los Angeles
405 Hilgard Ave.
Los Angeles, Calif. 90024

LIBRARY AND INFORMATION SCIENCES
University of Minnesota
2122 Riverside Ave.
Minneapolis, Minn. 55404

LINGUISTICS
Center for Applied Linguistics
1717 Massachussets Ave., N.W.
Washington, D.C. 20036

READING
Indiana University
200 Pine Hall
Bloomington, Ind. 47401

RURAL EDUCATION & SMALL SCHOOLS
Box AP, University Park Branch
New Mexico State University
Las Cruces, N. Mex. 88001

SCIENCE EDUCATION
Ohio State University
1460 West Lane Ave.
Columbus, Ohio 43221

TEACHER EDUCATION
(To be designated)

TEACHING OF ENGLISH
National Council of Teachers of English
508 South Sixth St.
Champaign, Ill. 61820

TEACHING OF FOREIGN LANGUAGES
Modern Language Assoc. of America
62 Fifth Ave.
New York, N.Y. 10011

VOCATIONAL & TECHNICAL EDUCATION
Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

June, 1968

ERIC CRIER 200 Pine Hall, School of Education, Indiana University, Bloomington, Indiana 47401.